XXVII. *Catalogue of One Thoufand new Nebulæ and Clufters of Stars.* *By* William Herfchel, *LL.D. F. R. S.*

Read April 27, 1786.

THE following Catalogue, which contains one thoufand new Nebulæ and Clufters of ftars, is extracted from a feries of obfervations (or Sweeps of the heavens), which was begun in the year 1783, and which I am ftill continuing till the whole be completed. As I may, perhaps, find an opportunity hereafter to publifh thefe obfervations at full length, I fhall now only mention fuch circumftances, relating to the inftrument and apparatus with which they were made, as will be neceffary to fhew what degree of accuracy may be expected in the determination of the places of thefe Nebulæ and Clufters of ftars; and alfo to ferve any aftronomer, who wifhes to review them, to form a judgment what inftrument will fuffice for this purpofe.

The telefcope I have ufed, as has been obferved on a former occafion*, is a Newtonian reflector of 20-feet focal length, and $18\frac{7}{10}$ inches aperture. The fweeping power has been 157, except where another is exprefsly mentioned. The field of view 15' 4".

My eye-glafs is mounted on that fide of an octagon tube, which, in the horizontal pofition of the inftrument, makes an angle of 45° with the vertical; having found, by experience, that this pofition, refembling the fituation of a reading defk, is

* Philofophical Tranfactions, vol. LXXIV. p. 437.

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preferable to the perpendicular one commonly ufed in the Newtonian conftruction.

In the prefent improved ftate of the apparatus this telefcope will, in general, give the relative place of an object by a fingle obfervation true to within $1\frac{1}{2}$ or 2 minutes of polar diftance, and 4 or 6 feconds of time in right afcenfion. But when there is an opportunity of repeating the obfervation, it will hardly differ a fingle minute in the former, and feldom fo much as 3 or 4″ in the latter. My apparatus, however, has not been equally perfect from the beginning; for, being from time to time adapted to the different views I had in fweeping, it could only arrive to its prefent degree of perfection by many experiments and gradual improvements.

To begin a fhort hiftory of this 20-feet telefcope. In the month of October of the already mentioned year I began to ufe it, being then mounted on its prefent ftand, but with a lateral motion under the point of fupport of the great fpeculum, by which its direction could be changed about 15 degrees. It had alfo a kind of moveable gallery in front, about nine feet long, which permitted me to follow a celeftial object near 15 degrees more; by which means I obtained a range of 30 degrees without moving the ftand. The Newtonian form has the capital advantage of rendering obfervations equally commodious in all altitudes; I had therefore placed the inftrument in the meridian, that I might view the ftars in their moft favourable fituation.

When I had feen moft of the objects I wifhed to examine, I proceeded to the work of a general review of the heavens. The firft method that occurred was, to fuffer the telefcope to hang freely in the center; then, walking backwards and forwards on the moveable gallery, I drew the inftrument from
that

that pofition by a handle faftened to a place near the eye-glafs, fo as to make it follow me, and perform a kind of very flow ofcillations of 12 or 14 degrees in breadth, each taking up generally from 4 to 5 minutes of time. At the end of each ofcillation I made a fhort memorandum of the objects I chanced to fee; and when a new nebula or clufter of ftars came in my way, I made a delineation of the ftars in the field of view, both of the finder and of the telefcope, that it might ferve me to find them again. This being done, the inftrument was, by means of a fine motion under my hands, either lowered or raifed about 8 or 10 minutes, and another ofcillation was then performed like the firft. Thus I continued generally for about 10, 20, or 30 ofcillations, according as circumftances would permit; and the whole of it was then called a *Sweep*, and as fuch numbered and regiftered in my journal.

When I had completed 41 Sweeps, the difadvantages of this method were too evident to proceed any longer. By going into the light fo often as was neceffary to write down my obfervations, the eye could never return foon enough to that full dilatation of the iris which is abfolutely required for delicate obfervations. The difficulty alfo of keeping a proper memorandum of the parts of the heavens which had been examined in fo irregular a manner, intermixed with many fhort and long ftops while I was writing, as well as the fatigue attending the motion, upon a not very convenient gallery, with a telefcope in my hands of no little weight, efpecially at the extremes of the ofcillations, where it made a confiderable arch upwards, were fufficient motives to induce me to look out for another method of fweeping. And it is evident, that the places of nebulæ hitherto determined, which was till the 13th of December, 1783, muft be liable to great inaccuracy. I therefore

began now to fweep with a vertical motion; and as this in-creafed the labour of continually elevating and depreffing the telefcope by hand, I called in the affiftance of a workman to do that part of the bufinefs, by which means I could obferve very commodioufly, and for a much longer time than before.

Soon after I removed alfo the only then remaining obftacle to feeing well, by having recourfe to an affiftant, whofe care it was to write down, and at the fame time loudly to repeat after me, every thing I required to be written down. In this man-ner all the defcriptions of nebulæ and other obfervations were recorded; by which I obtained the fingular advantage that the defcriptions were actually writing and repeating to me while I had the object before my eye, and could at pleafure correct them, whenever they difagreed with the picture before me without looking from it.

In about half a dozen fweeps, done according to this new way, I found that the ftars of FLAMSTEED's Catalogue en-tered nearly at the time when they were expected; this fug-gefted the poffibility of converting my telefcope into a tranfit inftrument. By way of trial, Dec. 18, 1783, I began to ufe a watch, and noted the times of the tranfits of ftars and ne-bulæ to the neareft minute; and, this fucceeding, Dec. 24, a fidereal time-piece was introduced.

I found alfo that, by the turns of the handle which gave motion to the telefcope, it was practicable, in a coarfe way, to afcertain the difference of altitude between any two objects that paffed the field of view; on which account, Dec. 30, I began to ufe an index-board, divided into inches, and marked with numbers, which, being placed behind the rope that moved the telefcope, would point out at what altitude a certain index, affixed to the rope, was fituated. My tackle of ropes and

3   pullies

pullies was fuch that, while the telefcope traverfed an arch of two degrees, the mark on the rope paffed over about 24 inches of the index-board : but the exact meafure was always to be determined experimentally, as it varied according to the fituation of the inftrument. I perceived immediately that the quantity of rope ufed in the motion of the telefcope would be much better obferved by the affiftant, if the index were brought within doors near the writing defk : to effect this, I ufed a fmall cord, which, being led off from the great one, was carried over a pulley into the obfervatory, fo as to pafs over a fet of numbers, which I now divided into fuch parts as, in an equatorial fituation of the inftrument, would give nearly each equal to one minute.

It would exceed the limits of this Paper to enumerate the various trials I made to bring the right afcenfion to greater perfection ; fuch as caufing the tube fometimes to hang inclining or rubbing againft a perpendicular plane ; at others, drawing it againft the fame by a fmall weight, faftened to a cord, paffing over a fide pulley, &c. I fhall alfo pafs over the feveral changes in the form of the machine fhewing the polar diftance, which, for convenience fake, was foon brought to an index moving over a dial, in the manner of a clock.

By way of directing the perfon who gives motion to the telefcope, a fmall machinery was added, which ftrikes a bell at each extreme of the breadth of the fweep, and is adjuftable to any required number of turns of the handle.

In June, 1784, I introduced a fmall quadrant of altitude, the ufe of which became foon after of the greateft confequence in determining the value of the numbers of the polar diftance piece. Hitherto I had fettled this value by caufing a ftar to pafs vertically through the field of the finder, which was very

accurately

accurately limited to two degrees; but now I found, by many comparifons between the degree determined by the quadrant and by the finder, that I had generally under-rated the value of the numbers. Fortunately fo many ftars of Flamsteed's Catalogue had been taken, that the numbers between their different polar diftances were fufficient to recover the value of the degree ; but this occafioned a laborious re-calculation of the places of all objects taken in near 300 fweeps. The quadrant being once introduced, I carried the refinements of the determination, in high fweeps where the ropes acted very unequally, fo far as to afcertain by it feparately the value of every 20 or 30 minutes throughout the whole breadth of a fweep of two degrees, and the numbers were then accordingly caft up by fo many different tables calculated on purpofe.

Being ftill difappointed in many inftances, when, on a review of a nebula whofe place I had before determined, I perceived a difference of 4 or 5 minutes in polar diftance, I began at laft intirely to new model the machinery of the polar diftance piece, and on Sept. 24, 1785, completed one with the following capital improvements. My former piece fhewed a fet of numbers whofe value differed in every fituation of the telefcope, and therefore required different and very extenfive tables to caft them up in degrees and minutes. This fhews at once both the degree and minute of the polar diftance of every celeftial object, without requiring any tables to caft up numbers. In the next place, the confiderable inaccuracy arifing from the unequal tenfion of the great ropes, and their expanfion or contraction by moifture or drynefs, is intirely taken away ; for now my index cord is contrived fo as to go off from the front of the telefcope itfelf, in the direction of a tangent to the arch it defcribes when moving; by which means this cord will even

ferve

ferve as an hygrometer to fhew the variations of the ropes that fufpend the telefcope. If a fhower of rain, for inftance, fhould fhorten them fo as to elevate the telefcope 2, 4, or 6 minutes, which has happened fometimes, notwithftanding they have all been well faturated with oil, the index cord will immediately make the polar-diftance-clock fhew this effect of the rain, by pointing out an equal change on the dial. As to the variations of the cord itfelf, they are in the firft place very trifling, fince it confifts merely of a few threads of hemp, very loofely twifted, well oiled, and always equally ftretched; but efpecially thefe variations are of no confequence, as they are fo eafily to be difcovered by the check of the quadrant of altitude affixed to the telefcope, or the fucceffive tranfits of known ftars, and may either be immediately corrected by the adjuftable hand of the polar diftance dial, or be left to be accounted for afterwards.

The improvement of the right afcenfion has not been lefs attended to; and the Royal Society having kindly intrufted me with an excellent time-piece, I fucceeded at laft by means of the addition of the following apparatus. Againft the fide of the tube is fixed a vertical iron plate, and the point of fufpenfion of the telefcope is difpofed fo as to permit this plate to be juft in contact with a roller which remains fixed during the time of a fweep. There is alfo a confiderable fpring applied on the oppofite fide, in fuch a manner as, by always exerting a preffure nearly uniform, to caufe the iron plate to rub againft the fixed roller as the telefcope fweeps up and down. By this means I have frequently, in very ftormy weather, obferved many hours without finding my time materially affected, and the corrections will feldom, in accurate obfervations, exceed a few feconds.

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To thofe who are accuftomed to the accuracy of tranfit inftruments in regular obfervatories, this telefcope, notwith-ftanding the above-mentioned improvements, may perhaps appear far from being brought to perfection; but they fhould recollect the fize of the inftrument as well as its extenfive ufe, fince I can not only follow any object for near a quarter of an hour, without difturbing the fituation of the apparatus, but can at pleafure, in a few minutes, turn it to any part of the heavens, and view a celeftial object wherefoever it may chance to be fituated, even the zenith not excepted.

From this account it will be underftood, that the places of a few of the nebulæ and clufters of ftars, determined before the 13th of December, 1783, may be faulty in right afcenfion as far as 1′ of time, and in polar diftance to 8 or 10′ of fpace. Afterwards the errors will be found to become gradually lefs confiderable till the latter end of the year 1784, when, I fuppofe, they will feldom exceed half that quantity. From that period to Sept. 24, 1785, they will diminifh, and pro-bably not often amount to fo much as 3 or 4′ in polar diftance, and 10 or 12″ in right afcenfion. And now I flatter myfelf that all places, determined fince the laft mentioned time, will generally be true to a very fmall quantity; fuch as 4 or 6″ in right afcenfion, and 1½ or 2′ in polar diftance, and often much nearer.

Some of the nebulæ in that part of the heavens which, in a former Paper, I have called the ftratum of Coma Berenices, are indeed fo crowded that there was no poffibility of taking them all in the center of the field of view, and a fomewhat lefs degree of accuracy may therefore be expected; but having ufed myfelf by very frequent eftimations of the parts of the field of view to judge of their value in time as well as in fpace,

I corrected

I corrected this defect at the moment of observation by affixing to the transits of these excentric nebulæ such proper marks of *plus* or *minus* in right ascension and polar distance as I judged would bring them to a central observation. A similar method, well known to good astronomers in estimating their tenths of seconds by the proportional space over which the stars move in their meridian passage, makes it unnecessary to expatiate on the degree of accuracy that long practice enables us herein to obtain.

If, however, I had been willing to delay giving this cata-logue till, by a repeated review of the heavens, the places had been more accurately determined, the work would undoubtedly have been more perfect; but whoever considers that it requires years to go through such observations will perhaps think with me, that it is the best way to give them in their present state, if it were but to announce the existence of such objects by way of inducing other astronomers also to look out for them. Another motive for not delaying this communication is to shew that my late endeavours to delineate the construction of the heavens have been guided by a careful inspection of them; and, probably, a catalogue which points out no less than one thousand in-stances of such systems as those are into which I have shewn the heavens to be divided, will considerably support what has been said on this subject in my two last Papers.

When the diurnal motion of the earth was first maintained, it could not but greatly add to the reception of this opinion when the telescope exposed to our view Jupiter, Mars, and Venus, revolving on their axes *; and if these instances of

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* To these may now also be added Saturn, on whose body I have, in the year 1780, seen several belts, with spots that changed their situation in the course of a few nights.

the fimilar condition of other planets fupport the doctrine of
the diurnal motion, the view of fo many fidereal fyftems, fome
of which we may difcern to be of a moft furprifing extent and
grandeur, will in like manner add credit to what I have pro-
pofed with regard to the condition of our fituation within a
fyftem of ftars : for, to the inhabitants of the nebulæ of the pre-
fent catalogue, our fidereal fyftem muft appear either as a fmall
nebulous patch ; an extended ftreak of milky light ; a large
refolvable nebula ; a very compreffed clufter of minute ftars
hardly difcernible ; or as an immenfe collection of large fcattered
ftars of various fizes. And either of thefe appearances will
take place with them according as their own fituation is more
or lefs remote from ours.

In the diftribution of the nebulæ and clufters of ftars into
claffes, I have partly confidered the convenience of other ob-
fervers : thus, in the firft clafs, the degree of brightnefs of the
nebulæ has been the leading feature, as moft likely to point
out thofe which their feveral inftruments may give them ex-
pectation to reach. The firft clafs, therefore, contains the
brighteft of them ; the fecond, thofe that fhine but with a feeble
light ; and in the third are placed all the very faint ones. Be-
fides this general divifion, I have added a fourth and a fifth
clafs, which contain nebulæ that, on different accounts, feemed
to deferve a more particular defcription than I had allotted to
the three former divifions.

The clufters of ftars are forted by their apparent compreffion,
in the manner of my former Catalogues of double, treble, and
multiple ftars ; fo that the clofeft and richeft clufters take up
the firft clafs ; the brighteft, largeft, and pretty much com-
preffed ones, the fecond ; and thofe, which confift only of fcat-
tered and lefs collected large ftars, are put into the laft.

In every class the order of time when the nebulæ and clusters of stars were difcovered, or first obferved with my 20-feet telefcope, has been followed; and that I might defcribe all thefe objects in as fmall a compafs as could well be done, I have ufed fingle letters to exprefs whole words, an explanation of which, with an example of the manner of reading thofe letters, is given. It fhould be obferved, that all eftimations of brightnefs and fize muft be referred to the inftrument with which the nebulæ and clufters of ftars were feen; the clear-nefs and tranfparency of the atmofphere, the degree of atten-tion, and many more particular circumftances, fhould alfo be taken into confideration; fo that probably fome of the nebulæ which I have called very bright, and very large, may only be juft perceivable, as very fmall faint patches, in many of our beft common telefcopes.

The Identity of each nebula in this catalogue has been well afcertained by a projection on a proper map, made on purpofe, which pointed out all other nebulæ near its place, and thus afforded the means of a rigorous examination. When, there-fore, feveral nebulæ are found within the limits of the accu-racy with which my telefcope can difcriminate them, in dif-ferent nights, it may be concluded, that they were feen either at once in the fame field of view, or otherwife in immediate fucceffion during the fame fweep.

In the fame manner thefe nebulæ have been compared with thofe that are contained in the two volumes of the *Connoiffance des Temps*, for the years 1783 and 1784, of which none have been inferted in this catalogue. It was indeed eafy enough to diftinguifh the nebulæ of that excellent collection from thofe of mine which in feveral places are very near them: The quantity of good light in my telefcope having enabled me,

even in bright moon-light nights, to fee occafionally fome of the moſt feeble of the former, when the latter could not by any means be perceived.

Perhaps it will not be difpleaſing to thoſe who may look out for fome of the objeĉts contained in this catalogue, to know that the piĉtures which were given in a former Paper, repre-fenting the various ſhapes and appearances of feveral nebulæ, have been aĉtually taken from nature, by Drawings made of them while I had them in view; I have therefore added a reference to thefe figures, as the defcriptions of the originals which they reprefent occur in their order in the catalogue.

Arrangement of the columns, and explanations of the abbreviations.

The firſt column contains the claſs and number of the nebulæ.

In the fecond are the dates when the nebulæ were firſt obferved.

The third column contains the ſtar, or other objeĉt, by which the place has been determined.

In the fourth column the letter p or f ſhews that the nebula is either preceding or following the ſtar.

In the fifth is the time, in ſidereal minutes and feconds, by how much it precedes or follows the fame ſtar.

The letter n or ſ, contained in the fixth column, denotes that the nebula is north or fouth of the determining ſtar.

In the feventh is the quantity, in degrees and minutes, by how much the nebula is more north or more fouth than the fame ſtar.

The eighth column contains the number of obfervations that have been made of each nebula; and it is to be noted, that

the

the determination of the place is generally taken from the last obfervation, on account of the more perfect state of the telefcope.

The ninth column, or remaining fpace, contains the defcription of the nebulæ, by means of fingle letters, or now and then a few words added to them.

The abbreviations are to be underftood as follows.

B. Bright.   v. very.
F. Faint.   c. confiderably.
L. Large.   p. pretty.
S. Small.   e. extremely.

Of thefe letters I have compofed vB. cB. pB. pF. vF. eF. vL. pL. pS. vS. eS.; all which require no farther explanation.

R. Round.   l. a little.
E. Extended.   i. irregularly.
M. in the middle.   g. gradually.
b. brighter.   f. fuddenly.
m. much.

When thefe are joined we have iR. mE. lE. bM. gbM. fbM. mbM. lbM. glbM. gmbM. fmbM., and by taking in fome of the former letters BM. vBM. cBM.; where no other remark will be neceffary than that writing for inftance bM, or brighter in the middle, it is intended to exprefs, that a nebula, which is faint at the borders, is lefs fo towards the middle. And thefe degrees of brightnefs happening fometimes to be fo well united from the moft imperceptible border to a very luminous center, I have, on fuch occafions, ufed the expreffion vgmbM, or very gradually much brighter in the middle.

r. refolvable.   m. milky.
er. (joined) eafily refolvable.
iF. (joined) of an irregular figure.
C. Cometic, or refembling a telefcopic comet.

N.

N. having a Nucleus, or bright compreſſed ſpot.

l, b, or d. (joined to minutes) long, broad, or diameter.

ſt. a ſtar.   ſtars.

n. north.   north of.

ſ. ſouth.   ſouth of.

p. preceding.   np. north preceding.   ſp. ſouth preceding.

f. following.   nf. north following.   ſf. ſouth following.

betw. between.   ver. 240. verified by a power of 240.

bran. branches.

che. chevelure.

mer. in the direction of the meridian.

par. in the direction of the parallel of declination.

np ſf. in a direction from north preceding to ſouth following.

ſp nf. in a direction from ſouth preceding to north following.

Example.   I. 13. 22. 69 Leon. p. 7. 57. n. 0. 2. 3. vB. mE. mer. ſmbM. 7 or 8′ l.

13th nebula of the 1ſt claſs. Feb. 22, 1784. It precedes the 69th Leonis of FLAMSTEED's Catalogue 7′ 57″ in time, and is 0° 2′ more north than that ſtar.   3 obſervations. Very bright, much extended in the direction of the meridian of the nebula, ſuddenly much brighter in the middle 7 or 8′ in length.

I. 32. . . . . . p. 5. 11. n. 0. 28. 3. cB. S. BN. and 2vF bran. 32d nebula of the firſt claſs. April 13, 1784. It precedes the 31ſt (or 1ſt d) Virginis of FL. Cat. 5′ 11″ in time, and is 0° 28′ more north than that ſtar.   3 obſervations. Conſiderably bright, ſmall, having a bright nucleus, and two very faint branches.

Firſt

First class. Bright nebulæ.

I.	1783	Stars.		M. S.		D.M.	Ob.	Description.
1	Dec. 19	82 (δ) Ceti	f	2 17	n	0 8	7	cB. cL. iF. bM.
2	—	3 Leonis	p	18 7	f	1 12	5	cB. cL. vgbM. N. R.
3	—	34 Sextant	p	28 55	f	0 13	4	cB. pL. C. mbM.
4	—	— —	p	28 27	f	0 10	4	cB. pL. C. mbM.
5	30	81 Leonis	p	2 42	n	0 7	2	B. pS. iR. bM. r.
	1784							
6	Jan. 19	64 Virginis	f	33 56	f	0 1	3	vB. pL. gmbM.
7	23	49 Leonis	f	126 45	f	0 40	1	vB. L. R. The place inac.
8	—	32 (2.) Virg	f	2 50	n	0 48	5	cB. pL. iR. mbM. r.
9	24	10 (ι) Virg	f	3 12	f	0 35	4	cB. E. np ff. N and 2 bran. 3'l.
10	—	— —	f	33 37	n	0 4	4	vB. pL. lE. gmbM. 2'l. 1½'b.
11	Feb. 15	5 Comæ Be.	p	1 30	f	2 11	1	B. pL. lE. bM. m.
12	19	6 Comæ	f	9 12	f	0 9	2	B. pS. R. BM. r.
13	22	69 Leonis	p	7 57	n	0 2	3	{ vB. mE. mer. fmbM. 7 or 8'l. Fig. 11.
14	—	29 (γ) Virg	f	0 43	n	1 23	2	cB. cL. mE. near par. 3 or 4'l.
15	—	— —	f	3 23	n	0 58	2	cB. mE. fp nf. fbM. 4 or 5'l.
16	—	— —	f	10 34	n	0 13	2	cB. vL. iF. vgmbM.
17 18	Mar. 11	46 (i) Leo {	f f	15 50 / 16 18	f f	1 32 / 1 29	5 5	{ The 2 p of 3 Both vB. cL. mbM. C II 41. Fig. 4.
19	14	11 Comæ	p	10 30	n	0 46	1	vB. pL. gbM.
20	15	73 (n) Leonis	f	8 52	f	1 57	2	vB. mE. nearly par.
21	—	— —	f	25 31	f	1 49	3	vB. cL. R. gmbM.
22	—	34 Virginis	p	22 24	f	0 17	2	cB. pS.
23	—	— —	p	18 24	f	0 19	2	B. S. mE.
24	—	30 (ρ) Virg	p	1 42	f	0 5	2	vB pL. r. near 2 Bft.
25	—	34 Virginis	f	4 45	f	0 40	1	B. S. in a line with 2 ft.
26	19	52 (K) Leonis	p	3 45	f	2 9	1	cB. pL. not R. mbM.
27	Apr. 8	46 (i) Leonis	f	18 47	f	0 43	3	vB. BNM. and 2 F bran. np ff.
28	—	34 Virginis	p	19 36	n	1 8	2	{ One of two, at 4 or 5'. dift. B. cL.
29	12	73 (n) Leonis	p	1 9	f	0 30	3	vB. cL. E. par. mbM.
30	13	31 (1 d) Virg	p	17 41	n	0 32	2	vB. cL. lE. iF.
31	—	31 (1 d) Virg	p	8 0	n	0 37	1	vB E. mbM. r. betw. 2 Bft.
32	—	— —	p	5 11	n	0 28	4	cB. S. BN and 2 vF. bran.
33	15	9 (o) Virgin	f	3 12	n	1 39	1	B L. mE. mbM. r.
34	—	59 (ι) Virgin	f	20 42	f	0 34	2	vB. cL. E np ff. SBN.
35	17	34 Virginis	p	31 42	n	1 5	1	B vmE. vBM. 9 or 10'l.
36 37	—	— —	p	11 24	n	0 20	1	{ Two. Both B. S. lE.
38	18	32 (2 d) Virg	p	11 36	n	0 0	1	B. vL. mE. mbM.

I.

I.	1784	Stars.		M.	S.		D.	M.	Ob.	Description.
39	Apr. 24	51 (θ) Virg	p	21	36	f	0	14	1	vB. vL. ſmbM. rN.
40	—	—	p	5	48	n	0	2	1	cL. vBSNM.
41	25	28 Virginis	f	9	24	n	1	2	1	B. L. iR. lbM.
42	—	26 (χ) Virgin	f	30	27	n	0	8	2	cB. L. iR. vgbM.
43	May 9	49 (g) Virgin	p	28	6	f	0	51	1	E. vBM. 5 or 6' l.
44	21	51 (e) Ophiu	f	7	18	n	0	0	2	cB. pL. N.
45	24	43 Ophiuchi	p	6	36	n	0	4	2	B. R vgmbM.
46		—	f	0	54	n	1	46	1	pB. cL. R. BM. r.
47	June 16	1 (m) Aquilæ	f	17	48	f	0	33	1	B. vL. iF. er. ſt viſible.
48	17	43 (d) Sagitⁱ	p	114	6	n	1	44	1	B. L. R. gbM. er.
49	24	10 (γ) Sagit	p	2	18	n	0	23	1	B. pL. bM. r.
50	—	19 (δ) Sagitⁱ	f	3	0	f	0	33	1	cL. R. vBM. m.
51	July 12	22 (λ) Sagit	f	3	12	f	0	13	1	cL. R. vBM. er.
52	Aug. 21	17 Delphini	f	6	0	n	2	24	4	vB. S. R. gmbM. r.
53	Sept. 5	66 (v) Cygni	f	78	6	f	0	51	2	vB. cL. mE. mbM. r.
54	Oct. 5	35 (v) Andr	f	12	44	f	2	50	1	B. cL. R. mbM. Place inacc.
55	19	66 Pegaſi	p	17	59	n	0	2	3	cB. mE. mer. gbM. 4'l. 2'b.
56 57 }	Nov. 16	4 (λ) Leonis	f	0	46	f	1	29	1	{ Two, at 1' diſtance. Both cB. cL. appear like one mE.
58	17	19 Eridani	f	5	9	f	1	22	2	B. S. lE. mbM.
59	20	15 (ι) Navis	f	64	18	n	0	21	1	S. cBM. lE. m.
60	Dec. 9	19 Eridani	p	6	51	n	0	16	1	vB. S. lE. mbM.
61	1785 Jan. 6	6 Sextantis	p	8	42	n	0	31	2	vB. S. iF. 1' nfcBſt.
62	10	55 (ζ) Ceti	p	0	25	n	0	37	2	cB. pL. E. bM.
63	—	80 Ceti	f	5	12	f	0	25	1	B. R. mbM. 1' d.
64	—	8 (1 ρ) Erid	p	15	9	n	0	2	2	vB. pL. lE. mbM.
65	Feb. 7	31 Crateris	f	23	30	n	0	52	1	vB. pL. iR. bM. like 2 N.
66	8	12 Hydræ	f	25	2	f	1	7	1	B. vS. iF. mbM.
67	—	8 (η) Corvi	p	37	17	n	2	10	3	cB. pL. iF. mbM. 2 or 3' d.
68	—	53 Virginis	p	12	40	n	1	4	1	cB. iR. mbM.
69	—	—	p	11	4	n	1	34	1	cB. pL. iR.
70	Mar. 5	106 Virginis	f	1	2	n	0	54	1	vB. cL. iF. vgbM.
71	—	19 (δ) Libræ	p	0	3	n	1	4	2	cB. vS. b towards f ſide.
72	13	23 Leonis min	f	13	7	n	0	13	1	cB. cL. E. mbM.
73	—	13 Can. vena	p	50	17	f	0	22	1	vB. S.
74	—	13 Can. vena	p	43	5	f	1	11	1	cB. R. mbM.
75	—	—	p	40	35	f	1	9	1	vB.
76	—	—	p	38	3	f	0	52	1	cB. L. E.
77	—	—	p	34	15	n	0	23	1	vB. L. broadly E. bM.
78	April 3	27 Urſæ	f	7	46	n	0	4	1	vB. cL. vſmbM.
79	—	—	f	33	52	n	1	17	1	cB. pL. R. vgmbM.
80	—	—	f	67	10	n	0	46	1	cB. S. i elliptical.
81	6	41 Leonis min	p	0	6	n	1	40	2	cB. cL. m. juſt p 2 ſt.

I.	1785	Stars.		M.	S		D.M.		Ob.	Description.
82	Apr. 6	14 (b) Comæ	p	37	40	f	0	14	2	cB. pL. lE. mer. vgbM.
83	—	21 (g) Comæ	f	0	10	n	1	12	1	cB. pl. iR. mbM.
84	—	— —	f	19	34	n	0	55	1	cB iR. fBM. m. 7 or 8' d.
85	10	40 Comæ	f	5	9	n	0	18	1	cB. pL.
86	11	39 Leonis min	p	13	14	n	0	59	1	cB. pL. mbM. brightness lE.
87	—	44 Leonis min	f	9	30	n	1	1	1	vB. vL. gbM.
88	—	— —	f	13	30	n	0	1	1	cB. cL. iR. mbM.
89	—	14 (b) Comæ	p	8	18	n	0	55	1	vB. S. lE.
90	—	— —	p	6	30	n	1	57	1	The np of 2 cB. pL R. II. 377.
91	—	15 (c) Comæ	f	1	10	n	0	19	1	vB. E. par. pBLN. and 2 bran.
92	—	— —	f	9	8	f	0	19	1	{ vB. vL. mE. np ff. 10 or 12' 1. 4 ft. in it.
93	—	31 Comæ	f	2	56	n	1	24	1	cB. pL.

Second class.   Faint nebulæ.

II.	1783	Stars.		M.	S		D.M.		Ob.	Description.
1	Oct. 28	41 Aquarii	p	15	::	f	½	::	1	F. cL. mE. bM. er.
2	30	24 (α) Pis. aust	f	14	40	n	1	2	3	pB. S. iF. mbM.
3	Dec. 13	17 (1 φ) Ceti	p	9	::	n	2	::	2	F. L. mE. between 2 cBst.
4	—	41 Ceti	f	15	13	n	0	37	6	pB. pS. R. mbM. C.
5	18	82 (δ) Ceti	p	0	5	n	0	46	8	pB. S. lE. bM.
6	—	— —	p	1	::	n	½	::	1	S. C, between 2 L and 1 S st.
7	19	45 Eridani	p	1	13	n	0	54	3	F. pL. iR. vlbM.
8 }	—	44 Eridani	f	2	11	f	0	41	4	{ Two. The first. F. S. r.
9			f	2	18	f	0	42	4	{ The second, F. vS. r.
10	24	88 (γ) Pegasi	p	13	38	f	0	23	2	F. pL. E. sp nf. bM. r.
11	30	6 Comæ	f	1	24	n	0	24	2	F. pL. nearly R. r.
12	—	27 Comæ	p	3	15	f	0	9	2	pB. cL. lE. mbM. r.
	1784									
13	Jan. 18	78 (ι) Leonis	f	6	18	f	1	10	2	pB. pL. mbM. r.
14	—	3 (ν) Virginis	f	2	20	n	1	22	1	lE. not C.
15	—	20 Virginis	f	4	12	f	0	42	2	F. pL. pR.
16	23	56 Leonis	p	0	32	n	1	32	4	F. vS. nearly R.
17	—	9 (o) Virginis	f	11	54	f	1	33	3	F. pl. E. followed by III. 91.
18	—	31 (1 d) Virg	p	12	28	n	1	1	2	F. S.
19	—	I. Class 7 Neb.	p	0	0	f	0	12	1	F. pS. R.
20	—	31 Bootis	p	118	45	f	0	38	2	vS.
21	—	32 (2 d) Virg	f	9	28	n	0	22	4	pB. pL. b towards the p side.
22	—	31 Bootis	p	80	15				1	F. vS.
23	24	75 Leonis	f	70	0	n	0	26	2	F. mE.
24	—	— —	f	97	0	n	0	7	2	F. pL.
25	—	78 Virginis	p	7	50	f	1	34	4	pB. cL. nearly R. mbM.

II.	1784	Stars.		M.	S.		D.	M.	Ob.	Description.
26	Jan. 28	11 (s) Virg	f	18	0	n	0	45	1	pB. cL. b towards the f fide.
27	30	31 Bootis	p	9	6	f	0	2	3	F. pL. R. lb not M.
28 }29	Feb. 15	41 (γ) Leonis	f	3	45	n	0	18	1	{ Two, about 2' afunder. Both F. cL. R. Fig 3.
30	—	68 (δ) Leonis	f	6	30	f	2	23	1	pB. r.
31	22	29 (γ) Virg	p	2	31	n	0	55	2	pB. cL. lE. par. r.
32	23	84 (τ) Leonis	p	6	30	n	0	7	1	pB. vS. bM.
33	—	—	p	6	0	n	0	20	1	pB. pL. R. bM.
34	—	60 (σ) Virgin	p	51	23	f	1	27	4	F. S.
35	—	16 (c) Virgin	f	8	45	n	0	15	2	pB. mbM.
36	—	60 (σ) Virgin	p	46	5	f	1	29	3	F. vL. iR. bM. 6' l 4' b.
37	—	16 (c) Virgin	f	13	15	f	0	40	2	pB. E. np ff. mbM.
38	—	35 Virginis	p	5	30	f	0	53	2	pB. pL. iF. r.
39	—	—	p	3	0	f	0	20	1	pB. contains 2 ftM.
40	Mar. 11	6 (h) Leonis	f	1	43	n	0	27	3	F. pL. lbM.
41	—	46 (i) Leonis	f	16	30	f	1	35	4	The f of 3. F. E.
42	—	78 (o) Leonis	p	14	0	n	0	12	1	F. S.
43	12	36 (ζ) Leonis	p	3	10	f	0	40	2	pB. cL. iF.
44 }45	—	20 Leonis	f	28	15	n	0	48	1	Two. Both. F. E. lbM. r.
46	—	68 (δ) Leonis	p	37	30	n	1	29	1	pB. S. r.
47	—	54 Leonis	p	2	26	f	1	49	2	pB. pL. lE. r. 3 or 4 ft in it.
48	14	85 (l) Gemin	f	56	45	f	0	42	1	pB. pL. lbM. contains 1 ft.
49	—	86 Leonis	p	15	0	f	0	19	1	vgbM. r.
50 }51	—	—	p	13	30	f	0	22	1	{ Of three that M. pB. cL. R. bM. That to the n. S. R. bM. III. 27.
52	—	—	p	10	0	f	0	5	1	pB. S. lE. bM.
53	—	81 Leonis	p	1	36	n	1	19	2	F. E. r.
54	—	85 Leonis	p	1	24	n	1	29	2	F. S. R.
55	—	11 Comæ	f	4	45	n	0	24	1	The f. of 2. r. See Note.
56	—	25 Comæ	p	8	30	n	0	1	2	pL. iR. bM. 2 or 3' d.
57 }58	15	5 (ξ) Leonis	p	7	15	n	0	18	1	{ Two, diftant 1' np ff. The p. pS. lbM. r. The f. pL. lbM. r.
59	—	—	f	26	30	f	0	53	1	vS. C. in a row with 2 F and 1 Bft.
60	—	12 (t) Virg	p	5	15	n	0	10	1	F. S.
61 }62	—	34 Virginis	p	26	12	f	0	31	2	{ Two. nearly par. The firft F. pL. E. The fecond F. pL. R.
63	—	—	p	24	42	f	0	9	2	F. pL. mE.
64	—	12 (t) Virg	f	11	45	n	0	57	1	F. vS.
65	—	—	f	14	45	n	0	50	1	pB. not vS.
66	—	30 (e) Virg	p	9	30	n	0	56	1	pB.
67	—	—	p	8	30	n	1	6	1	pB. vS.
68	—	34 Virginis	p	10	24	f	0	36	2	pB.
69	—	30 (e) Virg	p	0	48	f	0	4	2	pB. pL. R. mbM. r.

II.	1784	Stars.		M.	S.		D.	M.	Ob.	Description.
70	Mar. 15	30 (ϱ) Virg	f	0	45	n	1	7	1	A nebula.
71	—	—	f	2	0	n	1	0	1	S.
72	—	34 Virginis	f	0	15	f	0	54	1	S. lE.
73	—	—	f	4	0	f	1	3	1	F. not vS.
74 75	—	—	f	5	30	f	0	42	1	Two, nearly par. The p pB nearly R. The f. pB. vmE. 8 or 10′ distance.
76	—	20 (χ) Serpˢ	p	3	12	f	0	42	2	pB. pL. lE. gbM. r.
77	19	52 (K) Leonis	p	4	42	f	0	27	2	pB. pL. E. b. M. r. f. pBst.
78	—	—	p	0	12	f	0	27	2	pB. pL. r.
79	—	15 Bootis	f	18	30	f	0	15	1	F. L. R. lbM. r. 4 or 5′ diaʳ
80	21	47 (δ) Cancri	f	4	45	n	0	55	1	pB. pL. E. r. 2 or 3 st in it.
81	—	51 (m) Leon	f	1	15	f	1	41	1	pB. pL. not R. r.
82	—	—	f	8	15	f	1	35	1	F. S. lE. r. f. pBst.
83	—	3 Comæ	p	0	15	f	0	43	1	F. pL. r.
84	—	—	f	12	30	f	0	59	1	F. S. R. r. Note.
85 86	—	25 Comæ	p	13	0	f	0	21	1	Two. The p. pB. S. The f. F. S.
87	—	—	p	11	15	f	1	33	1	S. bM. r.
88	—	—	p	10	45	f	0	53	1	S. bM. r.
89	—	6 Comæ	f	11	12	n	0	31	2	S. bM. r. near Bst.
90	—	25 Comæ	p	7	30	f	0	3	1	pB. bM. r. near Bst.
91	—	—	p	6	0	f	0	18	1	vS.
92	—	—	p	5	30	f	0	24	1	S.
93	—	—	p	4	0	f	0	51	1	F. vS.
94	—	—	p	2	0	f	1	35	1	F. S.
95	—	27 Comæ	f	2	45	f	1	23	1	pB. vmE. nearly mer.
96	—	15 Serpentis	f	1	0	f	1	5	1	pB. pL. not R. bM. r.
97	—	26 Serpentis	f	2	30	n	0	35	1	pF. S. r. p. 2 pBst.
98	23	8 Leonis	f	15	45	n	0	20	2	F. cL. iR. mbM. 4 or 5′ diaʳ
99	April 8	52 (K) Leo	f	0	42	f	0	12	1	pB. S.
100	—	—	f	13	30	n	0	42	1	F. pS. r.
101	—	—	f	14	0	f	0	20	1	pB. S. mbM.
102	—	70 (θ) Leonis	f	0	48	f	0	38	1	F. pS. R. lbM. r.
103	—	94 (β) Leonis	p	9	12	n	0	47	1	F. S. E. r. 2 or 3 st visible in it.
104	—	—	p	3	18	f	0	48	2	pB. S. R. r. pLrN.
105	—	34 Virginis	p	35	6	n	1	17	2	pB. pL. R. vgmbM. r.
106	—	—	p	33	18	n	1	28	2	F. pL.
107	—	6 Comæ	p	0	24	f	1	0	1	pL.
108	—	—	p	0	6	f	1	2	1	mE. r.
109	—	—	f	0	24	f	1	54	1	r.
110	—	—	f	3	12	f	0	3	1	S. r.
111 112	—	—	f	5	18	f	0	18	1	Two, about 2′ distant. The first R. r. The 2d, E. r.

II.	1784	Stars.		M. S.		D.M.	Ob.	Description.
113	April 8	6 Comæ	f	10 54	n	0 9	1	E. r.
114	—	34 Virginis	p	16 54	n	1 28	2	F. r.
115 } 116 }	—	6 Comæ	f	14 0	f	1 21	1	{ Two. Both r.
117	—	— —	f	14 24	f	0 54	1	r.
118	—	— —	f	15 36	f	0 28	1	S. Note.
119	—	— —	f	18 54	n	0 35	1	pL. r.
120	—	— —	f	19 6	f	0 25	1	L. r.
121 } 122 }	12	34 Virginis	p	17 54	n	1 21	1	Two. Both pF. S. bM.
123 } 124 }	—	— —	p	16 24	n	0 29	2	{ The two p. of 3. Both F. S. bM. Note.
125	—	— —	p	4 18	n	1 25	1	not vF. S. r.
126	—	— —	p	3 0	n	1 11	2	pB. L. E. r.
127	—	— —	p	2 30	n	1 39	1	F. vS. R. lbM. r.
128	—	— —	f	0 42	n	1 54	1	L. R. bM. r.
129	—	41 Virginis	f	19 0	n	0 11	1	F. pL. lbM. R. r.
130	—	20 (χ) Serp^s	p	12 30	n	0 12	1	F. not S. iF. r.
131	13	56 Leonis	p	3 48	f	0 26	1	pB. vL. nearly R. lbM.
132	—	δ (π) Virgin	p	4 48	n	0 7	1	pL. E. pBM. r.
133	—	) (o) Virginis	f	7 46	f	1 41	2	not vF. S. E. mer.
134	—	11 (s) Virgin	f	4 24	f	0 0	1	F. mE.
135	—	— —	f	5 54	n	0 38	1	S. E. pBM.
136	—	— —	f	6 30	n	1 39	1	F. S. iF. r.
137	—	9 (o) Virginis	f	12 32	f	2 2	2	F. pL. r.
138	—	11 (s) Virgin	f	9 6	n	0 20	3	F.
139 } 140 }	—	— —	f	9 30	n	0 0	3	{ Two. The 1st is the largest. The 2d vF.
141 } 142 } 143 }	—	— —	f	13 18	n	0 18	3	{ Three nebulæ. The last is the largest.
144	—	31 (1 d) Virg	p	17 9	n	0 42	2	F. pL. the largest of 2.
145	—	60 (σ) Virg	p	50 28	n	0 30	2	vF. S. E.
146	—	31 (1 d) Virg	p	14 6	f	0 34	1	F. pL.
147	—	— —	p	7 36	f	0 20	1	pB. pL. mE. r.
148	—	— —	p	0 18	n	0 31	1	not F. R. vgbM.
149	—	— —	f	0 9	n	0 53	4	F. pL. iF. r.
150	—	24 (α) Serp^s	p	73 42	n	1 10	1	F. pL. nearly R. er.
151	—	12 Herculis	f	4 18	f	0 26	1	not vF. pL. iR. bM. r.
152	15	78 (ι) Leonis	f	4 24	f	1 1	1	F. mE. r.
153 } 154 }	—	2 (1ξ) Virgin	p	3 0	n	2 2	1	{ Two, about 5' distant. Both F. pS. C.
155	—	20 Virginis	p	6 6	f	0 40	1	F. pL. lE. lb. towards p. side.
156	—	— —	p	4 36	f	0 26	1	F. pL. lE. r.

II.	1784	Stars.		M.	S.		D.	M.	Ob.	Description.
157	April 15	20 Virginis	p	3	36	f	1	29	1	F. pL. mE. bM. r.
158	—	31 (1 d) Virg	p	8	38	n	1	51	3	pT. pL. nearly R. r.
159	17	81 Leonis	f	0	36	n	0	24	1	pB. S. bM. almost stellar.
160	—	— —	f	1	0	n	0	45	1	cL. R. vgbM.
161	—	90 Leonis	f	5	36	n	0	53	1	F. not S. R. bM.
162	—	34 Virginis	p	51	54	n	0	0	2	not vF. pL. iR. lb. towards f. fide.
163	—	—	p	33	6	n	1	13	1	pS.
164	—	— —	p	32	48	n	0	13	1	pS. vmE.
165	—	— —	p	32	30	n	1	13	1	F. vmE.
166	—	— —	p	27	36	n	0	53	1	pB. vS.
167 } 168 }	—	— —	p	21	30	n	0	49	1	{ Two nebulæ. { The most f. E.
169	—	— —	p	20	30	n	0	40	1	S.
170	—	— —	p	19	42	n	0	49	1	F.
171 } 172 } 173 }	—	— —	p	19	6	n	0	20	1	{ Three nebulæ. { The two first vS. { The third S.
174	—	— —	p	17	48	n	1	16	1	F.
175	—	— —	p	12	36	n	1	9	1	pF. L.
176	—	— —	p	3	48	f	0	37	1	F.
177	—	20 Bootis	f	3	30	f	1	42	1	pF. not S. lbM. r.
178 } 179 }	—	28 (β) Serps	p	12	6	f	0	7	2	{ Two, very close. Both S. stellar. The f. is largest.
180	22	15 (η) Virg	f	8	59	f	1	18	3	pB. L. iR. er.
181	—	29 (γ) Virg	f	5	18	f	0	58	1	pF. pL. E. r.
182	—	— —	f	6	24	f	1	54	1	pF. pL. E. r.
183	24	51 (θ) Virg	p	30	36	n	0	14	1	pB. cL. E. vsmbM.
184	—	—	p	28	30	n	0	26	1	not F. L. lE. lbM. r.
185	—	— —	p	11	0	n	0	10	1	F. S. iF. near pBst.
186	25	28 Virginis	f	12	6	n	0	51	1	pF. cL. R. r.
187	—	— —	f	12	42	n	0	37	1	pF. pL. r.
188	—	— —	f	22	54	n	0	57	1	F. cL. E. r.
189	—	72 (1 l) Virg	p	21	54	f	0	18	1	pB. R. vsmbM. near Bst.
190	—	26 (χ) Virg	f	23	44	f	0	6	2	F. pL. iR. lbM. r.
191	May 9	49 (g) Virg	p	4	6	f	0	46	1	pF. pS. R. r. near some Sst.
192	—	18 Libræ	f	10	36	f	0	16	2	pF. pL. lE. mer. nearly.
193	11	100 (λ) Virg	p	59	30	n	0	48	2	The most n. of 3. pB. vS. bM.
194	19	12 (d) Bootis	f	7	42	f	0	2	2	F. pL. R. mbM.
195	21	39 Ophiuchi	p	12	54	n	1	42	2	pB. cL. iR. lbM. r.
196	22	54 Hydræ	p	6	42	f	1	2	1	pB. S. nearly R. bM. r.
197	—	51 (e) Ophiu	f	35	36	f	1	13	1	pB. pL. iR. r.
198	24	3 (p) Sagitt	f	18	42	f	0	4	1	pF. not L. crookedly E. er.
199	June 16	64 (ν) Ophiu	f	2	48	n	0	48	1	pB. pL. R. gbM. r.
200	24	10 (γ) Sagitt	p	1	6	n	0	22	1	F. pS. r. unequally B.

II.	1784	Stars.		M.	S.		D.	M.	Ob.	Description.
201	July 13	18 Sagittarii	p	7	54	f	0	55	1	F. pL. lbM. r.
202	17	12 (φ) Cygni	f	17	36	f	0	53	1	A refolvable nebulous patch of ſt.
203	—	65 (ζ) Cygni	p	9	30	f	0.	16	2	pB. pL. iE. bM.
204	Aug. 7	24 Sagittarii	p	9	18	n	0	50	1	pB. S. ſtellar. not verified.
205	—	—	p	1.	42	n	0.	33	1	pB. cL. iE. bM.
206	Sept. 7	52 (ᵏ) Cygni	f	5	36	n	1.	22	1	F. S. crookedly E. r.
207	—	44 (η) Pegaſi	p	34	27	n	1	15	1	cL. R. gmbM. er.
208	10	84 (Ψ) Pegaſi	p	13	48	n	1	0	1	F. cL. R. vgbM. ff. ſt.
209	—	34 (ζ) Andr	p	5	57	n	1	12	2	F. pL. iR. equally B. r.
210	11	31 (δ) Andr	f	18	12	f	0.	26	1	F. pL. unequally B. near pBſt.
211	—	13 Triang	f	5.	24		0	35	1	F. pL. lE. bM. n. 2 ſt.
212	12	63 Pegaſi	p	19	42	f	0	15	1	pB. pL. lE. mbM. r. f. 2 Fſt.
213	—	79 Pegaſi	p	2.	36	n	0	42	1	F. pL ER. lbM.
214	—	40 Androm.	p	7.	18	f	0.	15	1	F. E. p Bſt.
215 216 217	—	—	f	4.	30	n	0	41	1	⎰ Three. mer. Nearly equal in ⎱ fize. All. F. vS. R. propor- ⎱ tion of diſt. f to n. 2 to 1.
218	—	—	f	5.	30	n	1.	22	1	F.
219 220	—	—	f	7.	36	n	1.	22	1	⎰ Two. The p. F. vS. ⎱ The f. pL.
221	—	3 (ε) Triang	p	6.	12	f	0	15	1	F. pL. mE. r. 1½′ l.
222	—	—	p	5.	12	f	10	0	1	F. pL. mE. r. 1½′ l.
223	—	—	p	2.	12	f	1	52	1	pB. pS R.
224	13	43 (β) Andr	p	0.	18	n	0.	5	1	pB*. cL. R. bM. ⎰ * Though β And. ⎱ in the field
225	—	9 (γ) Trian	f	4.	18	f	0	39	1	F. vS. R.
226	15	71 (γ) Pegaſi	p	4.	54	f	0.	5	1	F. pL. bM. elliptical.
227	—	89 (χ) Pegaſi	p	10	18	n	0	32	2	F. cL. mE. r.
228 229	—	6 (β) Arietis	p	5.	12	n	1	7	1	⎰ Two. Both F. pS. iR.
230	18	81 (φ) Pegaſi	p	1.	27	n	1	4	1	F. pL. R. bM. r.
231	—	—	p	1.	3	n	0	59	1	F. pL E. par. contains a ſtell. or ſt.
232	—	—	f	6.	45	n	1	35	1	F. S. R. or large ſtellar.
233 234	19	47 (λ) Pegaſi	p p	9. 8	3 33	n n	0 0	12 14	3 3	⎰ Two. The p. pB. lE. nearly mer. ⎱ The f. F. E. nearly par. 1½ l.
235	20	11 Piſcium	p	13	43	f	0	36	2	F. pL. broadly E.
236	—	90 (φ) Aqua	f	3.	53	n	1	22	4	pB. pL. iR. mbM.
237	—	79 Ceti	p	4.	48	n	0	36	1	F. E. mer. 2′ l.
238	Oct. 6	26 (β) Perſei	p	28.	34	f	0	10	2	pB. mE. near par. mbM. 4′ l 1′b.
239	7	27 (κ) Perſei	p	8.	27	n	0	2	1	The 1ſt of 2. pB. pS. r.
240	8								1	pF. pL. iR. er.
241	—								1	pS. C.
242	11	48 (μ) Pegaſi	p	39	50	f	0	54	2	F. S. iR. near and p. 2 or 3 ſt.
243	—	—	f	6.	27	f	0	54	2	F. S. iR.

2

II.	1784	Stars.		M. S		D.M.	Ob.	Description.
244	Oct. 14	54 (α) Pegasi	f	30 48	n	o 6	2	F. S. lE.
245	—	58 Piscium	p	3 36	n	2 16	4	pB. pL. R. lbM.
246	—	19 Arietis	f	4 54	f	o 49	1	F. pL. E. 4 or 5' f. cst.
247	15	13 Pegasi	f	10 0	n	o 28	1	pB. R. bM. 1' d.
248	—	54 (α) Pegasi	p	38 0	n	o 59	2	F. pS. a quartile with 3 Sst.
249	—	—	p	3 36	n	1 11	2	F. pS. E. f. pBst.
250	—	47 Piscium	p	67 12	f	o 37	1	F. lE. p. vBst.
251	16	54 (α) Pegasi	p	4 36	n	o 44	1	pB. cL. E. r.
252	—	102 (π) Pisc	p	12 48	n	o 45	1	F. pL. oval. lbM. p. pBst.
253	—	—	f	5 54	n	1 30	1	pB. pL. E. bM. r.
254	—	38 Arietis	f	8 48	n	o 34	1	F. S. iR. r.
255	18	82 Pegasi	p	8 21	f	o 11	2	pB. pS. R. gbM. r.
256	—	77 Pegasi	f	1 0	f	o 25	1	F. R gbM.
257	—	34 Piscium	f	12 6	f	o 39	2	F. pL. iR. mbM.
258	20	5 Eridani	p	8 54	n	1 54	3	F. vL. lbM. R. 7 or 8' d.
259	Nov. 16	43 (γ) Cancri	p	20 58	n	1 2	1	F. S. iF.
260	—	4 (λ) Leonis	f	3 22	f	1 16	1	F. pS. lE.
261	17	12 Pegasi	f	2 8	f	o 46	1	F. iR. less than 1' d.
262	—	27 Eridani	p	11 51	f	1 40	1	F. l and iE. above 1' d.
263	—	—	p	9 28	f	1 15	1	not vF. bM. 1¼ d.
264	—	47 (δ) Cancri	p	67 42	n	2 20	1	F. S.
265	20	4 (1 χ) Can	p	19 20	n	1 28	1	pF. pS. iF. lE. bM.
266	—	15 (ι) Nav	f	25 33	n	1 25	1	F. E. bM. r. 1½ d.
267	Dec. 9	27 Eridani	p	6 1	n	o 40	1	r. vS. R. lbM.
268	—	8 (ι) Crateris	p	63 16	f	o 16	1	F. S. R. SB point M. C.
269	—	10 Crateris	f	4 26	n	1 22	1	pB. pL. lE mbM.
270	—	13 106 (v) Pisc	f	11 56	f	1 11	1	pB. S. iR. mbM.
271 } 272 }	—	—	f	14 54	n	o 11	3	{ Two, very close nearly par. { The f. smallest and most n.
273	—	86 (γ) Ceti	p	0 14	n	1 44	1	F. S. iR.
274	—	92 (α) Ceti	p	3 54	f	o 47	1	F. vS. iE. er.
275	20	32 (2 τ) Hyd	f	9 55	n	1 32	2	pB. cL. iR.
276	—	10 (r) Virgin	p	6 58	n	o 5	3	F. pL. R. lbM.
277	—	—	p	5 14	f	o 1	3	F. S.
	1785							
278	Jan. 6	75 Ceti	p	1 38	f	o 5	1	pB. S. E.
279	—	35 Eridani	f	2 55	:	o 38	2	F. mE. vlbM. about 4' l.
280	—	14 Hydræ	f	5 2	n	o 21	1	F. vS. lE. ver. 240.
281	—	28 (A) Hydr	p	29 27	n	1 40	2	F. vS. E.
282	10	41 Ceti	f	17 28	n	o 20	2	pB. cL. lE. mbM.
283	—	—	f	21 26	n	o 10	2	pB. S. mbM.
284	—	80 Ceti	f	3 34	i	o 19	1	F. mE. about 3' l and ¾' b.
285	—	55 (ζ) Ceti	f	74 50	a	1 2	2	pB. E. fp nf about 1¼ l.
286	—	—	p	4 34	f	o 9	1	F. pL. R. lbM. f. Sst.

II.	1785	Stars.		M. S.		D.M.	Ob.	Description.
287	Jan. 27	17 Eridani	p	10 24	f	1 32	2	F. vS. lE. er. unequally B.
288	28	21 Eridani	p	1 55	n	0 35	3	F. pL. iR. r.
289	31	7 (ν) Lepor	f	2 32	n	0 51	1	F. pL. i triangular F. r.
290	Feb. 1	89 (π) Ceti	f	49 17	n	0 21	3	F. pL. R. lbM. f. pLst.
291	———	26 (π) Erid	p	3 39	f	1 25	1	pF. mE. mer. 3 or 4′ l and 1′ b.
292	4	5 (μ) Lepor	p	0 50	n	0 29	1	pB. iR. mbM. íp. pcst.
293	7	6 (3 b) Crater	p	52 51	n	0 23	1	pB. S. iR. bM.
294	———	31 Crateris	p	6 45	n	0 6	1	F. S. E. r.
295	———	— —	p	1 48	n	1 18	1	F. vS. iF. bM.
296	———	— —	p	0 12	n	0 24	1	pB. pL.
297	———	89 Virginis	p	11 47	n	0 18	1	pF. L. mbM.
298	8	8 (η) Corvi	f	18 44	n	1 51	1	{ F. pL. lbM. ½′ p. is a S suspected stellar.
299	———	53 Virginis	p	12 30	n	0 48	1	pB. pL. mbM.
300	———	— —	p	11 0	n	2 8	2	pF. eL.
301	———	— —	p	3 8	n	0 34	1	pB. pL. iR. mbM.
302	28	2 (1ω) Cancri	p	3 5	f	1 40	1	pF. vS. bM. er.
303	———	19 (λ) Cancri	p	2 22	f	0 35	1	F. S. mbM. r.
304	Mar. 4	11 Monoc	f	30 53	f	0 37	3	Some Sst with pB nebulofity.
305	5	20 Sextantis	p	7 14	n	0 49	1	F. S. lE. er.
306	———	88 Virginis	f	0 52	f	0 24	1	F. vS. iF. r.
307	———	— —	f	3 58	n	0 43	1	F. eL. iF. bM.
308	———	82 (m) Virg	f	12 28	n	1 6	2	F. S. iR. lbM.
309 } 310	———	99 (ι) Virg	p	12 31	f	0 1	1	{ Two. nearly mer. dift. 4′ Sst. betw. che. touch. { n. pB. cL. mbM. { f. F. S.
311	10	6 (3ᵇ) Crate	p	68 34	f	1 18	2	cB. S. mbM.
312	———	45 (ψ) Hydr	f	9 41	n	2 0	1	F. L. iR. vgbM.
313	———	— —	f	10 53	n	1 16	1	pB. lE. par. b towards f. fide.
314	———	— —	f	17 57	n	1 55	1	F. S. iF. bM.
315	11	23 (2φ) Can	f	0 29	f	1 0	2	F. S. R. bM. C. N.
316 } 317	12	64 (1 b) Gem	p	4 16	n	1 17	1	{ Two. fp nf. dift. 1′ che. mix. Both F. S. equal. N.
318	———	22 (1 φ) Can	f	8 38	n	0 36	1	F. pL. lE. mbM. r.
319	———	48 (1 ι) Canc	p	9 10	f	0 5	1	F. S. bM. r.
320	13	23 Leonis min	p	12 38	n	1 50	1	F. pS. R. lbM.
321	———	13 Can. ven.	p	51 31	f	0 50	1	pB. L. gbM.
322 } 323	———	— —	p	40 19	f	1 28	1	{ The two firft of 3 in a line. of unequal fize and brightnefs.
324	———	— —	p	38 3	n	0 17	1	F. S.
325	———	— —	p	26 51	f	0 30	1	F. pL. E. bM.
326	———	— —	p	14 11	f	0 4	1	F. mE. mer.
327	———	— —	f	19 43	f	0 35	1	F. pS.
328	———	— —	f	23 43	n	0 38	1	pB. pS. nearly R. mbM.

H.

II.	1785	Stars.		M. S.		D.M.	Ob.	Description.
329	Mar. 13	49 (δ) Bootis	p	48 50	n	0 5	3	pF. S. R. r. n. 2 pBſt.
330	—	— —	p	45 45	f	2 2	1	pB. pL. R. bM.
331	16	11 Urſæ min	p	60 36	f	0 2	1	F. pS. er.
332	—	— —	p	20 10	f	0 2	1	pB. cL. b towards p. ſide.
333 334	} April 3	27 Urſæ	f	20 14	f	0 2	1	{ Two. Nearly mer. Moſt n. pB. pS. bM. Moſt f. F. S. bM.
335	—	— — —	f	73 0	n	1 41	1	pF. cL. iE.
336	—	— — —	f	88 16	n	0 30	1	pB. vS. iR.
337	—	— — —	f	94 42	n	0 48	1	pF. pS. bM.
338	6	44 Leonis min	f	31 8	f	0 59	2	F. cL. iR. gvlbM.
339	—	53 Leonis min	f	19 26	n	1 0	1	pF. pS. iF.
340	—	72 Leonis	f	25 8	n	1 35	2	F. vS. ſtellar. ſhort ray p. ſide.
341	—	4 Comæ	p	29 46	n	0 35	1	F. ſtellar.
342	—	— —	p	22 2	n	0 37	1	F. pL.
343	—	21 (g) Comæ	f	4 36	n	1 56	1	not L.
344	—	— —	f	20 56	n	1 11	1	F. pL. lE.
345	—	— —	f	23 34	n	2 28	1	juſt f. pBſt.
346	—	31 Comæ	f	4 54	f	0 34	2	F. pL. iF.
347	10	36 (ζ) Leonis	f	11 14	f	0 33	1	pB. S. bM. r.
348	—	41 Leonis min	p	3 34	n	0 51	1	F. S. lE.
349	—	72 Leonis	f	14 12	n	1 1	1	F. pL. i triangular F.
350	—	— —	f	16 2	f	0 17	1	F. S.
351	—	— —	f	18 2	n	1 22	1	F. S.
352	—	92 Leonis	p	3 9	n	1 16	2	F. pS.
353	—	7 (b) Comæ	p	4 37	n	0 11	1	pB. cL. iF. bM.
354	—	— —	p	0 43	n	Q 2	1	F. vS.
355	—	22 Comæ	p	4 32	f	1 28	1	pF. L. broadly E.
356	—	40 Comæ	f	5 38	n	1 25	1	pB. S.
357	—	12 (d) Bootis	f	18 46	f	1 53	1	F. S. iF. lbM.
358	11	39 Leonis mi	p	8 4	n	0 8	1	F. pL.
359	—	— —	p	7 38	n	1 1	1	pB. pS. nearly R. bM.
360	—	44 Leonis mi	p	1 46	n	0 39	1	F. pL. iF.
361	—	— —	f	0 50	n	0 30	1	F.
362	—	— —	f	1 18	n	0 1	1	pB. pL.
363	—	— —	f	1 32	n	0 8	1	F. S.
364	—	— —	f	4 35	f	0 44	1	pF. pL. lE. b towards ff. ſide.
365	—	— —	f	14 2	n	0 56	1	F. mE. 1'½ l. but v. narrow.
366	—	— —	f	14 24	n	0 4	1	pF. pL.
367	—	— —	f	42 12	n	0 14	1	F. vS.
368	—	14 (b) Comæ	p	28 42	n	0 59	1	pF. bM.
369	—	— —	p	27 58	n	0 12	1	F. pL. E. b towards f. ſide.
370	—	— —	p	20 16	n	0 55	1	pB. cL. mb towards nf. ſide.
371	—	— —	p	17 40	n	1 55	1	One of three. F. iF.

II.	1785	Stars.		M. S.		D.M.	Ob.	Description.
372	Apr. 11	14 (b) Comæ	p	74 24	n	I 55	I	One of 4. The most n. of the p. side of a quartile. F. S.
373	—	— —	p	13 28	n	I 16	I	F. L. bM.
374	—	— —	p	12 22	n	I 12	I	F. S.
375	—	— —	p	11 4	n	I 14	I	F. pS.
376	—	— —	p	6 38	n	o 22	I	pF. S. almost R. bM.
377	—	— —	p	6 30	n	I 57	I	About 6' ff I. 90. pB. S. the place is that of the np.
378	—	— —	p	4 10	n	I 57	I	F. cL. lE.
379	—	— —	p	1 36	n	I 18	I	F. S.
380	—	15 (c) Comæ	f	9 8	f	I 22	I	F. pL.
381	—	31 Comæ	p	3 46	f	o 20	I	F. S.
382	—	—	f	3 16	f	o 9	I	F. pS.
383	—	—	f	4 26	n	o 12	I	F. pL.
384	—	—	f	5 2	f	o 23	I	F. pL.
385	—	—	f	5 40	n	o 4	I	F. pL.
386	—	—	f	5 54	f	o 6	I	F. pL.
387	—	—	f	5 48	n	o 55	I	F. pL.
388 389	—	41 Comæ	p	7 46	n	o 22	I	Two. The time taken between them.
390	—	—	p	7 10	f	o 43	I	F.
391	—	—	p	7 18	n	o 23	I	F.
392 393 394	—	—	p	5 46	n	o 14	I	Three. The 2 f. p near each other. The fp. about 8' dift. The time is that of the 2.
395	—	—	p	3 26	n	o 33	I	F. S.
396	—	—	p	2 16	n	I 29	I	F. S.
397	—	—	p	2 2	f	o 4	I	F. S.
398	—	—	p	1 30	n	o 8	I	F. S.
399	—	3 (β) Coron	f	6 54	f	o 27	I	pF. pL. iR. bM. r.
400	13	26 Bootis	f	47 12	f	I 33	I	F. pL. er.
401	14	11 Serpentis	p	2 14	f	I 35	I	pF. pL. vlbM. r. p. 3 Sft.
402	—	12 Ophiuchi	p	14 32	n	o 4	I	F. cL. E. fp nf. r. 3' l 2' b.

Third clafs.   Very faint nebulæ.

III.	1783	Stars.		M. S.		D.M.	Ob.	Description.
1	Nov. 3	36 (v) Orion	f	3 39	n	I 57	2	vF. S. mE. In the L. neb.
2	Dec. 21	60 Ceti	f	13 ::	n		I	eF. vS. R. lbM.
3	30	95 (o) Leonis	f	4 15	n	o 36	2	vF. vS. lE. r.
	1784							
4	Jan. 18	6 (h) Leonis	f	6 4	f	o 9	3	eF. vS. iE. fp. a triangle of Bft.
5	—	47 (e) Leonis	f	10 0	n	o 9	I	eF. eS. viewed alfo with 240.
6	—	59 (e) Virgin	p	28 ::			I	vS.

III.

III.	1784	Stars.		M. S.		D.M.	Ob.	Description.
7	Jan. 23	3 (β) Can. mi	f	36 30	n	0 19	1	Stellar. 240 left some doubt.
8	—	3 Leonis	f	1 6	f	0 28	3	E. er. 3 of the st. visible.
9 10 }	—	32 (2 d) Virg	f	46 54	f	0 25	2	Two. Both vF. and vS.
11	—	31 Bootis	p	38 15	f	0 1	1	vF. stellar.
12	—	— —	p	21 15	f	0 34	1	vF. forming an arch with 3 st.
13	28	11 (s) Virg	f	27 30			1	eF. not verified.
14	30	31 Bootis	p	12 30	f	0 9	1	eF. vL. not verified.
15 16 }	Feb. 15	68 (δ) Leonis	f	7 30	f	0 24	1	{ Two. The p. vF. L. 5 or 6' dia. The f. eF. S. Fig. 5.
17	23	16 (c) Virgin	f	6 0	f	0 47	1	vF. pS. r.
18	—	— —	f	11 45	n	0 38	1	vF. cL. r.
19	Mar. 11	2 (ε) Can. mi	f	5 16	n	0 28	1	{ 2vS and close st. with nebulosity left doubtful.
20	—	53 (l) Leonis	f	1 45	f	0 26	1	vF. r.
21	—	73 (n) Leonis	p	15 36	f	1 11	2	vF. S. C. ver. 240.
22	—	53 (l) Leonis	f	14 0	n	0 31	1	vF. vS. with 240 cL.
23	—	73 (n) Leonis	p	9 6	f	1 56	2	vF. vS. lE. ver. 240.
24	12	20 Leonis	f	11 30	n	1 19	1	vS. 240 left some doubt.
25	—	— —	f	26 15	n	0 0	1	vF. S.
26	—	20 Coma	f	4 30	f	0 37	1	eF. L. left doubtful.
27	14	86 Leonis	p	13 30	f	0 22	1	The most f. of 3.vF.vS.II.50.51.
28	—	— —	p	2 30	f	1 10	1	vF. L. r.
29	—	— —	f	7 15	f	0 34	1	vF. eS. stellar. ver. 240.
30	—	— —	f	10 0	f	0 40	1	vF. pS. f. 2 vBst.
31	—	11 Comæ	f	3 15	f	0 10	1	eF. forms a triangle with 2 Sst.
32	—	8 (n) Bootis	f	16 0	f	0 56	1	vS. or nebulous double st.ver.240.
33	—	5 (r) Herculis	f	3 30	n	1 30	1	eF. pL. partly ver. 240.
34	15	5 (ξ) Leonis	f	13 0	f	0 10	1	eF. vS. completely ver. 240.
35 36 }	—	78 (ι) Leonis	f	20 30	f	0 15	1	{ Two. par. 3 or 4' dist. Both eF. vS.
37	—	12 (t) Virgin	p	8 15	n	0 40	1	eF. vS. with 240. cL.
38	—	— —	f	11 15	n	0 20	1	vF. vS.
39	—	— —	f	12 45	n	0 15	1	vF. near some Bst.
40	—	30 (ς) Virg	p	11 15	n	0 31	1	eF. pL. easily overlooked.
41	—	— —	p	10 45	n	1 14	1	vF.
42	—	— —	p	10 15	n	1 23	1	vF.
43	—	34 Virginis	p	6 6	f	0 4	2	vF. pL. lE, contains two st.
44	—	— —	p	3 30	f	0 25	2	The p. of 2. vF. S. Note.
45 46 }	—	71 Virginis	f	0 37	n	0 12	1	{ Two. mistaken for one; but 240 shewed them both. cL. vF.
47	—	32 Bootis	p	25 0	f	0 47	1	vF. r. 2 or 3 st in it.
48	—	— —	f	3 30	n	0 27	1	eF.
49	19	62(1 o) Can.	p	14 33	f	1 5	2	F. cS. lE. np ff. like 2 joined.

III.	1784	Stars.		M.	S.		D.	M.	Ob.	Description.
50	Mar. 19	45 (1A) Can	f	3	15	f	o	4	1	eF. ver. 240. and cL. R.
51 52	}	—27 (ν) Leonis	p	7	0	n	o	21	1	{ Two. np. ff. 6 or 7' diſt. Both eF. p is the largeſt.
53	—	34 Leonis	f	1	0	f	o	41	2	eF. S. lE. r. 3 or 4 ſt in it.
54	—	52 (K) Leon	p	10	45	f	1	27	1	eF. cL. R. r. no N.
55	—	46 (i) Leonis	f	4	18	n	o	3	2	vF. vS. iR. r. ſome ſt. in it.
56	—	15 Bootis	p	13	0	f	o	40	1	eF. vS. E. r.
57	—	— —	p	10	30	f	o	28	1	eF. S. ver 240.
58	—	— —	p	8	30	f	o	43	1	eF. S. ver 240 and lE.
59	—	— —	p	6	15	f	1	10	1	eF. S. ver 240.
60	21	47 (δ) Cancri	f	20	0	n	o	23	1	vF. S. with 240 near Sſt.
61	—	— —	f	26	30	f	o	18	1	eF. 240 ſhewed 5 Sſt with nebuloſ.
62 63	}	— —	f	31	30	n	o	50	1	{ Two. nearly mer. Both vF. pS. R. lbM. r. with 240 cL.
64	—	— —	f	36	0	n	o	52	1	eF. 240 ſhewed ſome Sſt with neb.
65	—	51 (m) Leon	p	38	15	f	o	33	1	vS. E. r. better with 240
66	—	— —	p	9	15	f	o	44	1	vF. S. E. r. the ſame with 240
67	—	— —	f	11	45	f	1	45	1	vF. nebul. betw. 2 ſt. 2'l.ver.240
68	—	3 Comæ	p	1	45	f	o	40	1	2 vSſt with ſuſp. neb. 240 doubtf.
69	—	25 Comæ	p	5	0	f	o	18	1	vF. S.
70	—	27 Comæ	f	6	0	f	o	42	1	vF. not S.
71	—	42 Comæ	f	19	30	f	o	41	1	{ 3 Sſt with ſuſpect. nebul. 240 left ſome doubt.
72	—	4 (τ) Bootis	p	10	15	f	1	26	1	eF. vS. ver 240 and cL.
73	—	5 (r) Herc	p	4	0	f	1	50	1	eF. vS. eaſily ver. 240.
74	—	48 Serpentis	p	1	15	n	o	5	1	vF. S. ver. 240
75	Apr. 8	70 (θ) Leonis	p	12	24	f	1	7	1	eF. not S.
76	—	— —	f	4	0	f	o	41	1	eF. pL. eaſily ver. 240.
77	—	94 (β) Leonis	f	12	12	f	1	12	1	eF. pL. R. r.
78	—	6 Comæ	f	17	18	f	o	19	1	vF. r. by moon-light.
79	12	73 (n) Leonis	p	5	6	f	1	25	1	eF. not L. lE. r.
80	—	— —	f	18	36	f	o	48	1	vF. vS. R. bM. ſtellar. ver. 240
81	—	— —	f	22	35	f	1	11	2	vF. vS. R. ſtellar.
82	—	41 Virginis	p	1	42	n	1	7	1	vF. S. E. r.
83	—	— —	f	6	18	n	o	0	1	vF. S. iF. r.
84	—	70 Virginis	p	3	42	f	o	4	1	eF. vS. ſtellar. ver. 240.
85 86 87	}	— — {	f .. f	6 .. 6	12 .. 48	n .. f	o .. o	1 .. 9	1	{ Three. The two p. vF. S. R. The laſt vF. pL. R. Place of the 2d not taken.
88	13	56 Leonis	p	5	42	f	o	23	1	eF. no time to ver.
89	—	63 (χ) Leon	f	6	24	f	1	29	1	eF. a little doubtful.
90	—	3 (ν) Virginis	f	4	54	n	o	1	1	vF. vS. vlbM.
91	—	11 (s) Virg	f	7	48	n	1	19	1	The f. of 2. eF. II. 17.

III.	1784	Stars.		M.	S.		D.	M.	Ob.	Description.
92 93 }	April 13	9 (o) Virginis	f	16	15	f	2	4	2	Two. One vF. vS. The other just by. eF. eS. left doubtful.
94 95 96 }	—	— —	f	18	22	f	1	46	2	Three. All. eF. vS. R. In the 2d observation two of them were overlooked.
97	—	31 (1 d) Virg	p	17	9	n	0	42	2	The smallest of 2. eF. II. 144.
98	—	— —	p	3	6	n	0	0	1	eF. eS. The place not accurate.
99	—	32 (2 d) Virg	f	47	36	f	0	33	1	eF. S.
100	—	— —	f	50	42	f	1	8	1	eF. E.
101	—	— —	f	51	0	f	0	23	1	eF. pL. R. er. The ſt almost visible
102	15	2 (1 ξ) Virgin	p	1	48	n	1	54	1	eF. pL.
103	—	— —	f	0	24	n	0	58	1	vF. r.
104	—	4 (2 ξ) Virgin	p	2	12	n	0	19	1	vF. vS. left doubtful. Twilight.
105	—	31 (1 d) Virg	p	1	52	n	1	35	2	eF. vL. lbM.
106	—	33 Virginis	f	7	30	n	0	8	1	vF. pL. vlbM. r.
107	17	48 Leonis	f	6	54	f	0	8	1	eF. pL. a little doubtful. Twil.
108	—	63 χ)) Leonis	p	13	18	n	1	7	1	eF. eS. r.
109	—	90 Leonis	f	5	18	n	0	49	1	8 or 10' sp. II. 161. vS. stellar. not ver.
110	—	20 Bootis	f	1	54	f	2	29	1	vF. vS. lE. ver. 240.
111	18	{ 58(d) 84(τ) } Leon	f ..	8 ..	36 ..	n	1	43	1	vF. vS. r. ver. 240.
112	24	74 (φ) Leonis	f	10	6	f	1	52	1	eF. cL. R. r. near vBſt. ☽ light.
113	—	— —	f	34	18	f	1	3	1	eF. eS. with 240. 2 vSſt and nebu.
114	25	28 Virginis	p	14	18	n	1	35	1	2 vSſt with nebulosity with 240 left doubtful.
115	May 9	67 (α) Virg	f	1	12	f	1	10	1	vS. vF. stellar. ver. 240.
116	—	31 (ι) Libræ	p	8	48	n	0	15	1	vF. cL. nearly R. lm.
117 118 }	11	100 (λ) Virg	p	59	30	n	0	48	1	The two most f. of 3. That M. vF. vS. The most f. eF. eS. ver. 240. II. 193.
119	—	— —	p	55	42	n	0	29	1	eF. vS. stellar. ver. 240.
120	—	— —	f	6	24	n	0	9	1	eF. pL. iR. lb towards f. side.
121 122 }	14	9 (α) Libræ	p	27	0	f	0	36	1	Two np ff. The f. eF. 1' d. nearly R. The p. vF. vS. R. dist. 5'.
123	15	18 Herculis	f	40	30	f	0	47	1	vF. pL. R. lbM.
124	—	— —	f	43	30	f	0	47	1	vF. stellar. ver. 240.
125	16	25 (ρ) Bootis	p	33	12	f	1	10	1	vF. S. iR. lbM. almost stellar.
126	—	— —	p	2	18	f	0	24	1	2 Sſt. with suspected nebul. almost ver. 240.
127 128 }	—	28 (σ) Bootis	f	3	48	n	0	45	1	Two. 3' dist. par. The f. vF. vS. iR. The p. eF. vS. ver. 240.

III.	1784	Stars.		M. S.	D.M.	Ob.	Description.
129 130 }	May 16	28 (σ) Bootis	f	17 48	n	o 3	1	Two. about 6' dist. Both eF. vS. R. ver. 240.
131	—	— —	f	22 54	n	o 11	1	vF. E. close to a st. contains 2 st.
132	17	36 (ε) Bootis	p	16 54	n	o 26	1	eF. S. lE. the same with 240.
133	—	— —	p	2 36	n	1 35	1	cF. cL. iR. lbM.
134	19	12 (d) Bootis	f	4 28	n	o 12	2	vF. pL. E. par. r.
135	—	— —	f	12 30	n	1 5	1	eF. vS. stellar. ver. 240.
136	—	— —	f	14 8	f	o 30	2	vF. S. E. nearly par. with 240 like two stel.
137	—	76 (λ) Hercu	p	2 54	n	o 22	1	vF. not S. iE.
138 139 }	21	20 (1 γ) Libr	f	13 36	n	1 9	3	Two. nearly par. 7' dist. Both vF. not vS. R.
140	June 11	27 (β) Hercu	p	23 30	f	o 51	1	vF. vS. r. ver. 240. np. pBst.
141	July 12	16 (ψ) Capri	p	20 42	n	o 33	1	vF. cL. lE. lbM. 240. same.
142	21	70 Aquilæ	p	3 39	n	o 31	2	vF. E. about 2' l.
143	Aug. 7	35 (2ν) Sagit	p	0 0	f	o 3	1	3 vSst with suspected nebulosity.
144	Sept. 5	39 (h) Cygni	p	21 18	n	1 20	1	Some eSst. with neb. iE. ver. 240.
145	10	10 (κ) Pegasi	p	25 48	n	o 53	2	vF. lE. stellar.
146	—	69 Pegasi	f	11 24	n	1 53	1	vF. E. some Sst. with nebulosity.
147	—	85 Pegasi	f	7 54	f	1 13	1	2 or 3 st. with seeming nebulosity.
148	11	28 Androm	p	4 12	f	o 32	1	▼F. pL. lbM.
149	—	31 (δ) Andr	f	4 24	f	o 15	1	eF. vS. R.
150	—	2 (α) Trang	p	18 48	n	1 4	2	Near V. 18. vF. SR. bM.
151	—	5 (ι) Trang	p	7 0	f	1 18	1	vF. vS. stellar. betw. vL. and Sst.
152	—	39 Arietis	p	8 12	n	o 49	1	vF. pS. of equal light.
153	12	40 Andr	p	13 0	n	o 29	1	vF. pL. lE. vlb. towards f side.
154 155 }	—	— —	f	9 18	n	o 20	1	Two. Both eF. vS. The f is the largest.
156 157 158 }	—	43 (β) Andr	f	13 6	f	2 8	2	Three forming a rect. triangle. In the legs eF. vS. at the rectangle vF. pL.
159 160 }	—	40 Androm	f	20 6	n	1 30	1	Two. Both eF. S. but unequal.
161	—	17 (r) Persei	p	14 30	f	1 47	2	vF. S. iE. r.
162 163 }	—	21 Persei	p	13 42 / 13 18	n	o 30 / o 32	1	Two. Both vF. pS. R. lbM.
164	—	— —	f	15 36	f	1 19	1	eF. vS. 240 left a doubt.
165	13	66 (v) Cygni	f	43 0	n	o 4	1	5 or 6 st. forming a parallelogr. with mixed nebul. ver. 240.
166	—	— —	f	78 18	f	o 47	1	eF. vS.E.nf.&4 or 5'dist. fromI.53.
167 168 }	—	43 (β) Andr	f	15 30	f	2 12	1	Two. Both stellar.
169	—	— —	f	15 12	f	1 46	1	stellar.
170	—	— —	f	16 30	f	1 31	1	stellar.

III.	1784	Stars.		M. S.		D.M.	Ob.	Deſcription.
171	Sept.13	43 (β) Andr	f	17 30	f	0 56	1	ſtellar.
172 173	—	—	f	18 0	f	2 8	1	Two. Both vS. ſtellar. a little doubtful.
174	—	3 (ε) Triang	p	25 24	n	0 22	1	ſtellar. ver. 240.
175	—	—	p	12 48	n	2 29	1	ſtellar.
176	—	—	p	6 6	n	1 0	1	eF. ſtellar. 240 left ſome doubt.
177	—	9 (γ) Triang	f	9 36	f	0 17	1	vF. cL. iR. r. 2 or 3' d.
178	—	17 (γ) Perſei	f	9 6	n	0 13	1	vF. pL. R. SB place M.
179	15	6 (β) Arietis	p	3 0	n	1 30	1	vF. pL. lE.
180	18	40 Pegaſi	p	3 0	n	0 47	1	eF. vS. R. n. cLſt.
181	—	65 Pegaſi	p	6 48	f	1 49	1	vF. vS. R. ver. 240.
182	—	40 Pegaſi	f	38 24	f	0 51	2	4 or 5 Sſt. with nebul. 240 doubt.
183	—	89 (χ) Pegaſi	f	0 30	f	1 38	1	eF. S. iE.
184	20	11 Piſcium	p	17 44	f	0 22	2	eF. vS. ſtellar. ver. 240.
185	—	—	p	12 50	f	0 32	2	vF. E. er. 3 Fſt. viſible in it.
186	—	20 Piſcium	p	29 15	f	1 41	1	eF. vS.
187	—	—	p	14 39	n	0 1	1	eF. ſtellar. ver. 240 and cL.
188	—	—	p	13 33	f	0 9	1	eF. ſtellar. juſt like 187.
189	—	—	p	8 15	f	1 52	1	eF.
190	—	29 Piſcium	f	4 54	f	0 40	1	vF. vS.
191	—	34 Ceti	p	9 12	f	1 53	2	vF. mE.
192	—	72 Ceti	p	17 24	f	1 43	1	eF. S. ver. 240. with difficulty.
193	—	—	p	12 12	f	2 6	1	eF. ver. 240. with difficulty.
194	—	81 Ceti	f	38 6	n	0 55	1	eF. eS.
195	—	—	f	42 42	n	0 49	1	eF. eS. ver. 240.
196 197	—	—	f	47 0	n	0 36	1	Two. Both eF. ver. 240 but juſt ſuſpected with 157.
198	Oct. 6	12 (q) Perſei	p	3 3	n	0 40	2	cB. mE. vgmbM. near 4' l.
199	7	27 (κ) Perſei	p	8 27	n	0 2	2	The f of 2. vF. iF. pS. II. 239.
200	14	53 Piſcium	f	4 24	n	1 13	2	2 Sſt with nebuloſity ver. 240.
201	—	19 Arietis	f	4 6	f	0 47	1	vF. vS. E. f. pcſt.
202	15	47 Piſcium	p	83 54	f	1 15	1	eF. vS. ſtellar. ver. 240.
203	—	—	p	78 18	n	0 18	1	vF. cL. E. 2' l.
204	—	59 Piſcium	f	0 42	n	0 2	1	vF. S. ſp. 2 vSſt.
205	—	92 Piſcium	p	5 30	f	0 10	1	eF. ver. 240. diſcovered in gaging.
206	—	—	p	3 30	f	1 20	1	eF. S.
207	—	8 (ι) Arietis	f	5 12	n	0 32	1	eF. vS. ſtellar. plainly. ver. 240.
208	—	—	f	6 30	f	1 49	1	eF. vS. iR. juſt f. pBſt.
209	16	17 Delphini	f	18 6	f	0 11	1	vF. S. R.
210 211	—	54 (α) Pegaſi	p	2 48	n	0 46	1	Two. The p. vF. S. lE. The f. vF. vS. ſtellar.
212	—	—	f	21 6	f	0 59	1	eF. eS. ver. 240. completely though with difficulty.
213	—	—	f	27 36	n	0 40	1	eF. cL. ver. 240. betw. 2 Bſt.

III.	1784	Stars		M. S.		D.M.	Ob	Description.
214	Oct. 16	31 Arietis	p	36 48	n	1 24	1	vF. ftellar. ver. 240.
215	—	— —	p	36 6	n	0 6	1	eF. ftellar. difcovered by 240.
216 216 } 217	18	46 (ξ) Pegafi	f	3 15 3 25	f	0 37 0 32	3	{ Two. The p. vF. pS. R. vlbM. { The f. vF. pS. R. vlbM.
218	—	58 (n) Pegafi	f	13 51	n	0 4	1	eF. pS. lE.
219	19	15 Delphini	p	5 24	n	0 2	1	eF. vS. ftellar. ver. 240. with dif.
220	—	66 Pegafi	p	10 10	n	0 23	4	F. R. bM. 1½ d.
221	—	— —	p	7 10	n	1 0	2	vF. S.
222	—	— —	p	7 7	n	0 54	2	vF. S. R.
223	20	7 (b) Ceti	f	23 12	f	1 1	1	vF. lE. or oval. 1' d. np. 2 pBft.
224	—	1 (1 τ) Erid	p	21 42	f	2 11	2	vF. S. iR.
225	—	15 (δ) Lepor	f	6 24	n	0 49	1	eF. E. r. near 1' l. ver. 240.
226	21	70 (q) Pegafi	p	1 50	f	0 18	2	vF. vS. ftellar ver. 240.
227	Nov. 7	64 Ceti	p	2 24	f	0 37	1	2 or 3 Sft. with neb. nearly ver.240
228 } 229	—	73 (2ξ) Ceti	f	12 54	n	0 17	1	{ Two about 1' dift. The p. eF. { vS. ver. 240. The f. eF. eS. { 240. doubtf.
230	12	55 (l) Pegafi	p	3 36	f	0 29	1	eF. eS. 240 left some doubt.
231 } 232	—	31 (1 c) Pifc	p	9 0	f	1 0	1	Two. Both vF. ftellar.
233	—	— —	p	8 27	f	1 0	2	eF. pL. glbM.
234	16	43 (γ) Canc	p	11 24	n	1 6	1	vF. ftellar.
235	—	— —	p	3 20	n	2 4	1	eF. S. ver. 240.
236	—	4 (λ) Leonis	p	23 22	f	1 37	1	eF. lE. betw. 2 pBft. ver. 240.
237	17	33 Pegafi	f	12 54	n	0 46	1	eF. vS.
238	—	66 Pegafi	p	6 6	n	1 10	1	eF. eS. ver. 240. with difficulty.
239	—	4 Eridani	p	32 26	f	1 1	1	vF. S. 1' dia. or more.
240	20	12 Leporis	p	7 55	f	0 59	1	vF. vS. ftellar.
241	—	— —	f	3 39	n	0 23	1	eF. vS. lE. par.
242	—	15 (•) Nav	f	68 16	n	0 53	1	vF. lE. S. 1' d.
243	Dec. 2	56 Pegafi	p	9 16	n	0 42	1	vF. S. er.
244	9	48 Ceti	P	48 34	n	0 27	1	eF. vS. E.
245	—	15 Eridani	p	15 49	f	0 27	1	vF. cL. iE. r. unequally B.
246	—	19 Eridani	p	1 38	n	0 50	2	vF. E. equally B.
247	—	— —	f	6 5	f	1 4	1	eF. vS.
248	—	27 Eridani	p	4 23	n	1 7	1	vF. vS. lE.
249	—	— —	p	2 19	n	1 18	1	vF. vS.
250 } 251	13	89 (f) Pifci	f	2 25	f	0 14	1	{ Two. nearly par. 4 or 5' dift. { Both vF. vS. R.
252	—	— —	f	3 42	n	1 38	1	vF. pL. iR. lbM.
253	—	— —	f	6 48	n	0 11	1	eF. cL. E.
254	—	15 Sextantis	p	14 34	n	1 52	2	vF. E. np ff. 5' l. ¼' b.
255	—	7 Sextantis	f	20 27	n	0 42	1	vF. vS. p. triangle of Bft.
256	20	13 (ζ) Can.mi	f	26 5	f	0 48	1	vF. vS. ver. 240.

III.

III.	1784	Stars.		M.	S		D.M.	Ob.	Description.
257	Dec. 20	13 (ʒ) Can.mi	f	44	59	ſ	0 55	1	eF. pL. iF.
258	—	10 (r) Virgin	p	5	2	ſ	0 7	2	vF. S. E.
	1785								
259	Jan. 6	70 Ceti	p	10	34	ſ	0 38	1	eF. eS. iF.
260	—	— —	p	7	10	n	0 4	1	eF. vS. ſtellar.
261	—	75 Ceti	p	3	46	ſ	0 6	1	vF. cL.
262	—	94 Ceti	p	1	16	ſ	1 15	1	eF. ver. 240. with difficulty.
263	—	24 Eridani	p	3	22	ſ	0 11	1	eF. ſtellar. or lE. almoſt ver. 240.
264	—	28 (A) Hydr	p	26	48	n	1 19	2	vF. vS. R. ver. 240.
265	10	45 (θ) Ceti	f	32	28	ſ	0 46	1	eF. ſtellar. ver. 240.
266	—	— —	f	31	6	ſ	0 43	1	vF. lE, ver. 240.
267	Feb. 4	14 (ʒ) Lepor	f	0	1	ſ	1 56	1	vF. pS. iE. bM.
268	6	11 (α) Lepor	p	27	51	ſ	0 31	1	eF. vS. ſtellar. ver. 240. eaſily.
269	—	19 Leporis	p	32	23	n	1 11	1	eF. vS. ſtellar. ver. 240. eaſily.
270	—	— —	p	20	0	n	1 28	1	vF. eS. ſtellar. ver 240 difficulty.
271	—	8 (ʒ ν) Canˢ	f	8	0	n	0 4	1	3 or 4 Sſt with neb. vF. ver. 240.
272	7	6 (ʒ b) Crater	p	58	39	n	1 21	1	vF. pS. iF. vlbM.
273	—	— —	p	55	43	n	0 39	1	eF. vS. iF.
274	—	31 Crateris	p	4	40	ſ	0 14	1	vF. pL. iF.
275	8	12 Hydræ	f	20	30	ſ	1 49	1	vF. vS. bM. ½' ſ. Sſt.
276	—	38 (κ) Hyd	p	9	20	ſ	0 26	1	vF. vS. ſtellar. 240. the ſame.
277	—	39 (1 ν) Hyd	p	5	0	n	0 30	1	{ Two. 3 or 4' diſt. The moſt n. vF.
278									S. The ſ. vF. vS. Both ſtell.
279	—	8 (η) Corvi	p	31	26	n	0 16	1	eF. pL. better with 157 than 240.
280	—	— —	f	18	44	n	1 51	1	{ ½' p. II. 298. eF. eS. ſtell. 240. doubtful.
281	—	— —	f	20	38	n	0 46	1	vF. pS. r.
282	—	53 Virginis	f	7	12	n	1 12	1	vF. mE. ff np. v narrow.
283	17	41 (ω) Bootis	p	27	54	n	0 27	1	vF. vS.
284	Mar. 5	25 (f) Virg	p	54	12	ſ	0 19	1	vF. S. iE. lbM.
285	—	88 Virginis	f	8	45	n	1 17	1	eF. vS.
286	—	99 (ι) Virg	p	9	22	n	0 31	1	vF. L. b towards n.
287	—	— —	p	7	58	ſ	0 7	1	vF. pS. iF.
288	6	15 (ι) Navis	f	11	16	ſ	1 7	1	vF. cL. er. ſome of the ſt. viſ.
289	10	6 (3 b) Crat	p	69	14	ſ	0 25	2	F. vS. large ſtellar. lbM.
290	—	2 (ε) Corvi	p	16	1	n	2 3	1	eF. pL. broadly E. nearly par.
291	11	75 Cancri	p	2	53	ſ	1 13	1	vF. plℳ. R. bM.
292	12	46 Cancri	p	11	46	ſ	1 14	2	vF. pL. R. lbM. r.
293	—	23 Leonis	p	17	46	ſ	0 22	1	eF. eS. ver. 240.
294	13	57 (2 ι) Canc	p	2	44	n	0 15	1	vF. vS. R. bM. large ſtellar.
295	—	72 (τ) Canc	f	5	47	n	0 24	1	vF. vS. R. nf. 2pBſt.
296	—	— —	f	8	42	n	1 17	1	vF. S. R. lbM.
297	—	15 (f) Leon	p	13	8	ſ	0 34	1	eF. eS. 240 left a doubt.
298	—	18 Leonis min	p	20	56	ſ	0 44	2	vF. vS. iR. lbM.

III.

III.	1785	Stars.		M. S.		D.M.	Ob.	Description.
299	Mar. 13	13 Can. ven.	p	40 51	f	0 27	1	eF.
300	—	— —	p	40 19	f	1 28	1	The moſt f of 3. vF. II. 322. 323.
301	—	— —	p	28 58	f	1 41	1	vF. vS. R.
302	—	— —	p	27 40	f	1 2	1	eF. vS.
303	—	— —	f	5 43	f	1 43	1	eF. vS. ver. 240.
304	—	— —	f	6 26	f	1 47	1	eF. vS. ver. 240.
305	—	— —	f	11 0	f	1 9	1	vF. vS. lE.
306 } 307 }	—	— —	f	16 12	n	0 6	1	{ Two. The p. vF. vS. The f. { 7 or 8′ nf the firſt. vF. vS.
308	—	— —	f	17 29	n	0 13	1	vF. S.
309	—	— —	f	18 31	n	0 34	1	eF. vS.
310	—	49 (δ) Bootis	p	43 12	f	1 32	1	vF. vS. iF.
311	16	11 Urſæ min	p	24 18	n	1 18	1	vF. S. iR. between 2 pSſt.
312	—	— —	p	19 9	n	2 6	1	eF. vS. lE. 2 vSſt in it.
313	—	13 (γ) Ur. mi	f	27 8	n	0 12	1	vF. vS. lE.
314	—	— —	f	49 18	n	0 24	1	eF. vS. lE. er.
315	Apr. 3	27 Urſæ	f	3 42	n	0 46	1	eF. vS. ver. 240.
316	—	— —	f	51 42	n	1 43	1	eF. pS mE. r.
317	—	— —	f	65 18	n	1 19	1	vF. vS.
318	—	— —	f	69 10	n	0 20	1	vF. pL. r.
319	—	7 (β) Urſ. mi	p	32 2	n	2 26	1	eF. not verified.
320	6	72 Leonis	f	26 8	n	1 44	2	vF. vS. ſtellar.
321	—	4 Comæ	p	22 54	n	0 15	1	vF. pS.
322	—	— —	p	19 8	n	0 18	1	vF. ſtellar.
323 } 324 }	—	— —	p	14 43	f	0 40	1	{ Two. The ſp. vF. lE. The nf. { eF. 5 or 6′ diſt.
325	—	— —	p	13 46	f	0 45	1	eF. vS.
326	—	— —	p	5 47	f	0 17	1	{ eF. vS. ver. 240. diſcovered in { gaging.
327	—	— —	p	1 45	n	0 33	1	vF. pS.
328	—	31 Comæ	p	6 28	f	0 25	2	F. S.
329	—	21 (g) Comæ	f	14 45	n	2 26	2	vF. S.
330	10	36 (ζ) Leonis	f	4 54	n	0 29	1	vF. pS. vlbM. iR.
331	—	41 Leonis mi	p	12 16	n	1 36	1	vF. vS. vlbM.
332	—	54 Leonis	f	2 46	f	0 34	1	vF. 1′ n. Sſt.
333	—	72 Leonis	f	2 48	n	0 18	1	vF. vS. ver. 240.
334	—	— —	f	3 17	n	0 23	1	vF. S.
335 } 336 }	—	— —	f	7 12	n	1 12	1	{ Two. 2 or 3′ diſtant. Both vF. { vS. the moſt f. fainteſt.
337	—	— —	f	9 34	n	0 52	1	vF. S.
338	—	— —	f	25 56	f	0 38	1	vF. vS. 240. the ſame.
339	—	— —	f	26 30	n	1 44	1	vF. vS. 240. the ſame.
340	—	— —	f	28 36	f	0 19	1	{ vF. vS. pL. two ſtellar. ſuf- { pected near it.

III.	1785	Stars.		M. S.		D.M.	Ob	Description.
341	Apr. 10	7 (b) Comæ	p	26 41	n	o 56	1	vF. vS. ver. 240. easily.
342	—	- -	p	22 55	f	o 32	1	vF. vS. lE.
343	—	- -	p	20 7	f	o 4	1	vF. vS. 240. the same.
344 } 345 }	—	- -	p	18 31	f	o 43	1	{ Two. 5 or 6' distant. Both eF. vS. ver 240.
346	—	40 Comæ	f	1 38	n	2 8	1	eF. pL. lE. ver. 240.
347	—	12 (d) Bootis	f	7 40	f	1 17	1	vF. lE. S.
348	11	23 Leonis min	f	3 12	f	1 38	1	eF. lE. a little doubtful.
349	—	39 Leonis min	p	9 28	n	1 18	1	{ eF. 240 shewed a few Sst. with neb. but doubtf.
350	—	44 Leonis min	f	17 36	n	o 35	1	vF. S.
351 } 352 }	—	- -	f	20 58	n	o 51	1	{ Two. Both vF. vS. the most f. is the faintest.
353	—	- -	f	53 4	n	o 26	1	eF. 240 left it doubtful.
354	—	14 (b) Comæ	p	28 29	n	o 43	1	vF. vS. discovered in gaging.
355	—	- -	p	21 41	f	o 16	1	vF. S. pmE.
356 } 357 }	—	- -	p	17 40	n	1 55	1	{ Two of 3. the place is that of II. 371. Both vF. mE. A 4th suspected.
358 } 359 } 360 }	—	- -	p	14 24	n	1 55	1	{ Three of a quartile. The place is that of II. 372. All vF. vS. and all within 3'.
361	—	- -	p	0 40	n	o 18	1	vF. vL.
362	—	15 (c) Comæ	f	3 2	f	1 3	1	eF. cL. 4 or 5' l. 2' b.
363	—	41 Comæ	p	6 16	n	o 23	1	vF.
364	—	- -	p	5 24	n	o 25	1	vF.
365	—	- -	f	1 8	n	o 41	1	vF.
366	—	- -	f	2 26	n	1 18	1	vF. pS.
367	—	43 Comæ	f	1 24	f	o 2	1	vF. pL.
368	—	- -	f	11 2	f	o 53	1	vF. mE. 1½'l. r. discov. gaging.
369	—	- -		25 41	f	o 29	1	eF. vS. 240 left a little doubt.
370	—	- -	f	28 8	n	o 31	1	vF. S. mE. nearly mer.
371	—	14 (i) Coron	p	13 52	f	1 8	1	vF. S. R. ver. 240 easily.
372	13	93 Leonis	p	1 25	n	o 25	1	vF. cL. moon-light.
373	14	11 Libræ	f	1 18	f	o 12	1	vF. just n. Sst.
374	—	11 Serpentis	p	12 8	f	1 18	1	eF. pL. r.
375	25	93 Leonis	p	7 28	n	o 7	2	vF. vS. r.
376	26	- -	p	5 57	n	o 5	2	eF. vS.

Fourth claſs. Planetary nebulæ.

Stars with burs, with milky chevelure, with ſhort rays, remarkable ſhapes, &c.

IV.	1782	Stars.		M.	S.		D.M.	Ob.	Deſcription.
1	. 7	13(v)Aquarii	p	5	24	n	0 2	11	vB. nearly R. planetary not well defined diſk.
2	1783 Dec. 26	13 Monocer	f	6	4	n	i 27	4	cB. fan-ſhaped. about 2' l. from the center. Fig. 7.
3	1784 Jan. 16	15 Monocer	p	8	18	n	0 15	4	pB. m. like a ſt. with an electrical bruſh. Fig 8.
4	Feb. 22	69 Leonis	f	10	3	ſ	1 3	2	eF. S. like an ſt. with a vF. bruſh ſp. 240 ſhews the ſt.
5	—	29 (γ) Virg	p	9	0	n	1 33	2	A pBſt. with a m. ray ſ. par. 15 or 20' l. Fig. 6.
6	23	59 (c) Leonis	p	9	0	ſ	0 18	1	F. L. C. A central B. point with eF. m. chev.
7	Mar. 14	51 (m) Leon	f	17	0	ſ	0 39	2	F. pL. m. between 2 Bſt. like an electrical bruſh to the moſt n. but is not connected. R.
8 9	} 15	34 Virginis	p	10	12	ſ	0 51	2	A double Nebula: The che. run into each other. cloſe. not vF.
10	21	51 (m) Leo	p	21	15	ſ	1 48	1	A pcſt. with a vF. bruſh nf. with 240 2 vSſt. viſible in it, but not connected.
11	May 21	51 (e) Ophiu	p	1	42	n	0 14	2	pB. R. p. well defined planetary diſk. 30 or 40" d.
12	24	3 (p) Sagitt	f	22	0	n	1 47	1	F. L. iR. inclining to m. 3 or 4' d. like a bruſh to a np. ſt. but probably unconnected.
13	July 17 {	39 (b) Cygni	p	8	6	ſ	1 35	2	f pF. exactly R. of equal light. the edges p. well def. 1'd. See note.
		21 Vulpecu	f	2	6	n	1 51		
14	21	27(d)Aquilæ	p	6	6	ſ	1 45	2	vF. of equal light. r. 1' d. in the midſt of numberleſs ſt. of the milky way.
15	Sept. 8	21 (α) Andr	f	2	6	ſ	1 21	1	A Fſt. with S. chev. and 2 burs.
16	16	16(n)Sagittæ	f	17	12	n	0 1	2	pB. perfectly R. pretty well defined. 3/4' d. r.
17	20	81 Ceti	f	36	30	n	0 36	1	A Sſt. with a vF. nebulous bruſh 1½ or 2' l. diſcovered with 240.

IV.

IV.	1784	Stars.		M. S.		D.M.	Ob.	Description.
18	Oct. 6	14 Androm.	p	6 11	n	3 16	4	B. R. a planetary p. well defined diſk. 15″ diaʳ with a 7 feet reflector.
19	16	5 Monoc.	p	7 6	f	0 10	1	A ſt. of the 9 magnitude, with m. chev. i elliptical.
20	— — —		p	3 42	n	0 3	1	A ſt. of the 11 or 12 mag. affected like the foregoing, but vF.
21	Nov. 20	12 Leporis	p	8 48	n	0 24	1	vS. ſtellar. vBN. and vF. chev. not quite central.
22	Dec. 9	7 (ξ) Navis	f	3 10	f	1 28	2	L. pB. R. er. 6 or 7′ d. a faint red colour viſible. A ſt. 8 mag. not far from the center, but not connected. 2d ob. 9 or 10′ d.
23	1785 Jan. 6	75 Ceti	p	4 40	f	0 6	1	cB. a vBN. with a chev. of 3 or 4′ d.
24	—	50 (ζ) Orio	f	0 57	f	0 17	1	A Bſt. with m. chev. 5′ l. 4′ b.
25	31	19 Navis	p	67 0	n	1 15	1	A pcſt. with vF. and vS. m. chev. iF.
26	Feb. 1	34 (γ) Erid	f	16 16	n	0 49	2	vB. perfectly R. or vl. elliptical. planetary but ill defined diſk. 2d obſ. r. on the borders, and is probably a very compreſſed cluſter of ſtars at an immenſe diſtance.
27	7	6 (3 b) Crater	p	28 39	n	1 25	2	Beautiful, brilliant, planetary diſk ill defined, but uniformly B. the light of the colour of Jupiter. 40″ d. 2d obſ. near 1′ d. by eſtimation.
28	—	31 Crateris	f	1 0	n	0 47	1	pB. L. opening with a branch, or two nebulæ very faintly joined. The f. is ſmalleſt.
29	8	4 (ν) Crateris	f	3 36	n	0 16	1	A Sſt. with an eF. bruſh p. perceived in gaging. ver. 240.

Fifth claſs.   Very large nebulæ.

V.	1783	Stars.		M. S.		D.M.	Ob.	Description.
1	Oct. 30	18 (ε) Piſ. auſt.	f	128 17	n	1 39	6	cB. mE. ſp nf. mbM. Above 50′ l. and 7 or 8′ b. C. H. See note.
2	1784 Jan. 24	10 (r) Virgin	f	24 46	n	0 17	4	cB. mE. np ff. mbM. er. 9 or 10′ l with a branch towards the np.

V.	1784	Stars.		M. S.	D.M.	Ob.	Description.
3	Jan. 24	75 Leonis	f	104 0	f 0 24	1	eF. vL. er. R. 7 or 8' d.
4	Feb. 23	7 (b) Virgin	f	8 15	f 0 45	2	vF. R. 5 or 6' d.
5	Mar. 14	11 Comæ	f	0 45	n 0 32	1	L. E. r. 6 or 7' l.
6	21	4 (τ) Bootis	p	0 45	f 1 6	1	vL. eF. r.
7	Apr. 8	52 (K) Leonis	p	3 0	n 0 41	1	vL. F. r. almost R.
8	—	73 (n) Leonis	f	4 34	n 0 18	3	B. E. almost par. but l. np ff. near 15' l.
9	May 22	51 (e) Ophiu	f	32 48	f 0 40	1	L. E. broad. m. F.
10	} July 12	5 (i) Sagitt	f	2 42	n 0 49	1	Three nebulæ, faintly joined, form a triangle. In the middle is a double st. vF. and of great extent.
11							
12							
13	—	— —	f	4 54	n 0 39	1	Extensive m. neb. divided into 2 parts. the most n. above 15'. The most f. followed by stars.
14	Sept. 5	52 (k) Cygni	f	11 24	n 0 44	2	Branching nebulosity, extending in R.A. near 1½ deg. and in P.D. 52'. The f. part divides into several streams uniting again towards the f.
15	7	— —	f	0 6	n 0 0	3	Extended; passes thro' k Cygni. By the Newtonian view above 1 degree l. By the *Front-view* near 2 deg. l. See note.
16	11	28 Androm.	p	11 12	n 0 17	1	eF. 5 or 6' d.
17	—	2 (α) Triang	p	18 48	n 0 55	2	m. nebulosity. not less than ½ deg. broad. perhaps ¾ degree long, but not determined.
18	Oct. 5	35 (v) Andr	p	9 11	n 0 37	4	vB. mE. 30' l. 12. b. C. H.
19	6	26 (β) Persei	p	45 11	n 1 16	3	cB. mE. above 15' l. 3' b. a black division 3 or 4' l. M.
20	20 1785	7 (b) Ceti	f	33 9	f 1 48	1	A streak of light, nearly mer. 26' l. 3 or 4' b. pB.
21	Jan. 31	18 (μ) Canis	f	22 18	n 1 2	2	A broad E nebulosity. forms a parallelogram with a ray southwards; the parall. 8' l. 6' b. vF.
22	Feb. 7	61 Virginis	f	10 59	n 0 17	1	mE. ff np. 5 or 6' l. pF.
23	Apr. 3	27 Ursæ	f	13 18	n 0 0	1	L. F. lE. r. 6 or 7' l. 5 or 6' b.
24	6	21 (g) Comæ	f	5 20	n 1 25	1	A lucid ray 20' l. or more. 3 or 4' b. np ff. vBM. a beautiful appearance.

Sixth class.   Very compressed and rich clusters of stars.

Additional }	Cl. Cluster.	com. compressed.
abbreviations }	sc. scattered.	co. coarsely.

VI.	1783	Stars.		M.	S.		D.	M.	Ob.	Description.
1	Nov. 19	63 (p) Gemi	f	11	0	n	0	12	3	A beautiful Cl. of many L. and com. S. ft. about 12' d.
2	Dec. 30	18 (v) Gemi	f	27	10	f	2	9	3	A v. com. Cl. of eSft. iF. 5 or or 6' d.
	1784									
3	Jan. 24	12 Monocer	f	11	30	f	0	18	1	A Cl. of v. com. and eS. ft. E.
4	—4	Sextantis	f	5	30	f	0	5	1	A Cl. of v. com. S. ft.
5	Feb. 11	31 (2ξ) Gem	p	31	0	f	0	15	1	A Cl. of v. com. S. 7 or 8' d.
6	Mar. 8	67 Gemin	p	18	0	f	1	57	1	A Cl. of ft. of various fizes pm. com. M. p. rich.
7	14	42 Comæ	f	8	30	n	0	8	1	An eF. Cl. of eS. ft. with r. neb. 8 or 10'd.ver. 240. beyond doubt.
8	Apr. 25	26 (χ) Virg	f	23	44	i	0	6	i	A v. com. Cl. of ft. 8 or 9' d. e rich. iR. or lE.
9	May 17	11 Bootis	f	4	18	n	1	7	1	A Cl. of eS. and com. ft. 6 or 7' d. many of the ft. visible, the reft fo S. as to appear nebulous.
10	22	21 (α) Scorp	p	1	48	n	0	24	1	A v. com. and cL. Cl. of the smalleft stars imaginable. all of a dufky red colour. the next ftep to an er. neb.
11	—	39 Ophiuchi	p	13	24	f	0	26	i	A fine miniature of the 19 nebula of the Connoiff. des Temps (which is a Cl. of v. com. ft. much accumulated M. 4 or 5' d. all the ft. red.) 2 or 2½ d. the ft. F. red.
12	24	43 Ophiuchi	p	12	42	n	1	36	1	Another miniature Cl. like the preceding, but rather coarfer.
13	June 24	10 (γ) Sagitt	p	14	48	n	0	18	1	A Cl. of S. and p. com. ft. of feveral mag. 5 or 6' d. not v. rich.
14	July 11	9 Vulpec	p	4	0	n	0	33	1	A Cl. of eS. and v. com. ft. a parallelogram of 4' l. 2' b. mer.
15	July 12	34 (σ) Sagitt	p	6	54	n	0	27	1	A fufpected Cl. of vlft. of confiderable extent. not ver.
16	Aug. 18	12(γ)Sagittæ	p	4	18	f	i	32	1	A vS. Cl. of com. ft.
17	Nov. 16	42 (1ω) Gem	p	54	53	f	0	29	2	A v. rich Cl. of v. com. and eSft. 4 or 5' d. A miniature of the 35 Cl. of the Conn. des T. which it precedes 1' 18" and is 2' n.
	1785									
18	Mar. 4	11 Monocer	f	27	15	f	0	2	4	A v. com. and rich Cl. of vSft. iF. 8 or 9' d.
19	10	24 (1ft.)Libr	f	5	0	f	i	16	1	A beautiful L. Cl. of the moft minute and moft com. ft. of different fizes. 6 or 7' d. iR. F. red colour.

Seventh clafs. Pretty much compreffed clufters of large or fmall ftars.

VII.	1784	Stars.		M. S.		D.M.	Ob.	Description.
1	Jan. 18	90 (1 c) Tauri	f	11 0	f	1 30	2	A Cl. of L. scat. ft. 10 or 12' in extent, with a vacancy M.
2	24	8 Monocer	f	8 17	n	0 23	3	A beautiful Cl. of sc. ft. chiefly of 2 sorts. the first L. the second arranged in winding lines. contains the 12th Monoc.
3	Feb. 8	3 Leporis	p	72 30	f	0 30	1	A S. Cl. of com. ft. some pL.
4	19	15 (2 y) Orio	f	3 6	n	1 10	2	A Cl. of pL. and p. com. ft. c. rich. 20 or 25' d. iR.
5	23	13 Monocer	p	3 15	f	0 28	1	A Cl. of com. ft. of various mag. p. rich in Sft. not R.
6	Mar. 16	50 Gemino	f	3 55	f	2 9	1	A p. rich and com. Cl. of ft.
7	May 24	3 (p) Sagitt'	f	15 54	f	0 8	1	A c. rich, but p. co. sc. Cl. of ft. l. more com. M.
8	July 17	41 (i) Cygni	f	5 42	f	2 1	5	A v. rich Cl. of pS. sc. ft. most of the same size. 20' d.
9	19	12 Velpecu	p	0 5	n	0 30	2	A L. Cl. of p. com. ft. most of one size.
10	Nov. 20 1785	7 (ξ) Navis	f	5 56	n	0 40	3	A vL. Cl. of sc. ft. c. rich and com. more than 15' d.
11	Jan. 31	19 Navis	p	0 40	n	0 5	1	A c. rich Cl. of co. sc. ft. above 20' d.
12	Feb. 4	6 Navis	p	31 59	n	1 25	4	A beautiful Cl. of p. com. ft. near ½ deg. d. C. H.
13	6	2 (β) Canis	p	7 10	f	0 44	1	A Cl. of sc. Sft. not v. rich above 15' d.
14	8	18 (μ) Canis	f	3 17	n	0 20	1	A Cl. of co. sc. ft. 20' d.
15	Mar. 6	26 Canis	f	1 22	n	1 52	1	A S. Cl. of p. com. ft. not v. rich.
16	—	— —	f	1 56	n	0 16	1	A Cl. of sc. ft. c. rich. 20' d.
17	—	— —	f	6 26	n	1 1	2	A v. beautiful Cl. of pL. ft. v. rich. contains the 30 Canis.

Eighth clafs. Coarfely fcattered clufters of ftars.

VIII	1783	Stars.		M. S.		D.M.	Ob.	Description.
1	Dec. 3	14 Navis	p	4 0	n	0 40	2	A Cl. of co. sc. ft. The place is that of the most com. part which is not M.
2	26	58 (α) Orion	p	8 28	n	1 16	2	A S. Cl. of vS. sc. ft.
3	—	13 Monocer	f	1 30	n	1 2	2	An E. Cl. of L. sc. ft.

VIII.

VIII	1784	Stars.	M.	S.	D.	M	Ob.	Description.
4	Jan. 16	112(β) Tauri	p	0 51	n	0 38	3	A Cl. of co. and i. fc. pLſt.
5	18	15 Monocer	p	0 0	n	0 0	3	Double and attended by more than 30 cLſt.
6	24	8 Monocer	p	14 20	n	0 4	2	A Cl. of co. fc. ſt. not rich.
7	Feb. 10	4 Orionis	p	4 0	f	1 7	1	A Cl. of L. and S. fc. ſt. not rich.
8	15	97 (i) Tauri	p	5 28	n	0 13	2	A Cl. of cL. v. co. fc. ſt. perhaps a projecting point of the m way.
9	19	24 (γ) Gemi	p	8 15	n	0 15	1	A Cl. of vm. fc. ſt. of various magnit. near ½ deg. not rich.
10	Mar. 15	50(2A) Canc	f	3 0	f	0 44	1	A Cl. of v. co. fc. ſt. not rich.
11	16	50 Gemini	f	15 55	f	2 19	1	A Cl. of fc. ſt.
12	June 16	1 (m) Aquilæ	f	1 42	n	0 2	1	A Cl. of v. co. fc. ſt.
13	—	20 Aquilæ	p	12 48	f	0 56	1	A Cl. of co. fc. ſt. not rich.
14	18	43 (d) Sagitt	p	44 48	n	1 54	1	A Cl. of fc. pLſt.
15	July 15	63 Sagittarii	p	103 36	n	2 1	1	A Cl. of co. fc. ſt.
16	17	12 (φ) Cygni	f	13 6	f	0 44	1	A Cl. of not v. com. ſt. cloſeſt M. It may be called (if the expreſfion be allowed) a forming Cl. or one that ſeems to be gathering
17	18	33 Vulpec	p	24 18	n	0 4	1	A Cl. of many L. fc. ſt.
18	Sept. 4	61 (φ) Aquilæ	p	2 54	n	0 18	1	A S. forming Cl. of ſt.
19	—	— —	p	0 42	n	0 40	1	A Cl. of co. fc. L. ſt. not rich.
20	9	18 Vulpec	f	1 0	f	0 27	1	A Cl. of co. fc. ſt. not rich.
21	10	6 Vulpec	p	2 27	n	0 29	2	A Cl. of cL. co. fc. ſt.
22	—	18 Vulpec	f	1 12	f	0 12	1	A Cl. of co. fc. ſt.
23	Oct. 15	12 (γ) Delph	p	5 18	n	0 33	1	A Cl. of co. fc. ſt.
24	—	67 (ν) Orion	f	1 0	f	0 46	1	A SCl. of pL. white ſt.
25	16	10 Monocer	f	0 0	f	0 0	1	The 10 Monoc. ſurrounded by by many Bſt.
26	Nov. 16	1 (H) Gem	p	2 16	n	0 3	1	A Cl. of ſt. of various magnit. not v. ric. 6 or 7′ d.
27	20	11 (e) Navis	p	36 41	n	0 46	1	A S. Cl. of fc. ſt. not rich, nor v. com.
28	Dec. 5	54(1λ) Orion	p	11 53	f	0 15	1	A Cl. of pL. fc. ſt. not rich.
29	9	101(4b)Aqu	f	32 30	n	0 11	1	A Cl. of a few co. fc. L. ſt.
30	—	25 (δ) Canis	f	57 10	f	1 15	1	A vL. Cl. of many co. fc. L. ſt.
	1785							
31	Jan. 6	19 Monocer	p	15 36	n	1 3	1	A L. Cl. of fc. ſt. not v. rich.
32	10	26 Monocer	p	34 32	f	0 41	1	A Cl. of co. fc. ſt. of many magn. p. rich. above 15′ d.
33	—	— —	p	32 50	f	1 15	1	A Cl. of fc. L. ſt.
34	—	— —	p	26 36	1	0 52	1	An extenſive Cl. of fc. ſt.
35	31	2 Navis	p	21 23	n	1 21	3	A Cl. of pL. fc. ſt. p. rich. about 20′ l. crooked fig.

VIII.	1785	Stars.		M. S.		D. M.	Ob.	Defcription.
36	Jan. 31	19 Navis	p	43 20	n	1 0	1	A forming Cl. of co. fc. ft. 20 or 30′ dia.
37	Feb. 4	6 Navis	p	16 47	n	1′ 43	2	A S. Cl. of p. com. ft. of various fizes. not v. rich.
38	——	2 Navis	p	8 55	n	0 10	2	A Cl. of p. com L. and S. ft. R. above 15′ d.
39	Mar. 4	11 Monocer	f	23 36	n	0 3	3	An extenfive Cl. of fc. ft. of various fizes.
40	11	47 Geminor	p	4 2	n	0 18	1	Cluftering L. fc. ft. many of equal fize.

Notes to fome Nebulæ and Clufters of Stars.

I. 7. This remarkable appearance being no longer in the place it has been obferved, we muft look upon it as a very confiderable telefcopic comet. It was vifible in the finder and refembled one of the bright nebulæ of the Connoiffance des Temps fo much, that I took it for one of them till I came to fettle its place; but this not being done till a month or two after the obfervation, the oppor‑ tunity of purfuing and inveftigating its track was loft.

I. 13.. The figures referred to, in the defcription of this and fome other nebulæ, may be found in the Philofophical Tranfactions, vol. LXXIV. tab. XVII. p. 450.

I. 28. The numbers annexed to fome of the nebulæ refer to the clafs and number of the preceding Catalogue: thus, II. 41. denotes that the 41ft in the fecond clafs is the third nebula, following the two here defcribed.

I. 28. Near the 84. and 86. neb. of the Connoiffance des Temps.

II. 6. This has probably been a telefcopic comet, as I have not been able to find it again, notwithftanding the affiftance of a drawing which reprefents the telefcopic ftars in its neighbourhood.

II. 55. The preceding is the 85 of the Connoiffance des Temps.

II. 84. 6 or 8′ following the 100 of the Connoiffance des Temps.

II. 118. Juft following the 88. of the Connoiffance des Temps.

II. 123. 124. The third is the 87th of the Connoiffance des Temps.

III. 44. The following is the 60th of the Connoiffance des Temps.

IV. 13. Before the value of the degree was more ftrictly afcertained, the two obfervations were thus:

| 21 Velpeculæ | f | 2′ 6″ | n | 1° 51′ |
| 39 (*h*) Cygni | p | 8 6 | f | 1 35 |

which, if there be no error in the place of the stars in FLAMSTEED's Catalogue, differ about 14′ in polar distance, for which reason in the second Paper on the Construction of the Heavens this nebula was put down twice, whereas it now appears, that both observations belong to the same.

V. 1. This nebula was discovered Sept. 23, 1783, by my sister CAROLINE HERSCHEL, with an excellent small Newtonian *Sweeper* of 27 inches focal length, and a power of 30. I have therefore marked it with the initial letters, C. H. of her name. See also V. 19. discovered Aug. 27, 1783, and VII. 13. discovered Feb. 26, 1783.

V. The *Front-view* is a method of using the reflecting telescope different from the Newtonian, Gregorian, and Cassagrain forms. It consists in looking with the eye glass, placed a little out of the axis, directly in at the front, without the interposition of a small speculum; and has the capital advantage of giving us almost double the light of the former constructions. In the year 1776 I tried it for the first time with a 10 feet reflector, and in 1784 again with a 20 feet one; but the success not immediately answering my expectations, it was too hastily laid aside. By a more careful repetition of the same experiment I find now, that several other considerable advantages, added to the brilliant light before mentioned, make it so valuable a construction that a judicious observer may avail himself of it at least in all cases where light is more particularly wanted; and from the experience of 30 sweeps, which I have already made with it, I may venture to announce it to be a very convenient and pleasant, as well as useful, way of observing. With regard to the position of objects, it differs from other constructions, by inverting the north and south, but not the preceding and following.

Errata of the Catalogue.

The following nebulæ should stand thus.

I. 54.	35 (*v*) Andr.	f	18 36	f	1 26	1	pB. S. R. vgbM.
II. 1.	41 Aquarii	p	11 45	n	0 17	2	F. cL. mE. bM. er.
II. 239.		In the description read					The 2 l. of two.